

# CLINICAL MEDICINE AND SURGERY

GEORGE B. LAKE, M.D.

• Editor •

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## EDITORIAL

### Alphonse Laveran Soldier and Scientist

WE sometimes have a tendency to forget the debt we owe to army medical officers, even though the names of Gorgas and Walter Reed are familiar to all American physicians. Much of our knowledge of epidemiology and sanitation is based upon the work of men in the medico-military services of various countries.

It was a French medical officer, Alphonse Laveran, who laid the foundation for the control of malaria, which, until his time, was one of the most fatal scourges of tropical countries.

Laveran was born in Paris in 1845, and was graduated from the University of Strassburg in 1867. Having a taste for the excitement and adventure of military life, he entered the medical service of the French army, and was so studiously intent upon his duties that, eight years after his graduation, he was qualified to write a treatise on military medicine, which was published in 1875, when he was only thirty years old.

In 1880 he was on duty with the army in Algeria, where he was appalled by the toll which malaria was taking among the soldiers, as well as in the civilian population. Having trained himself in microscopy, he set himself to find out the cause of the disease, and on November 6, of that year, discovered the plasmodia, though it took another year to work out the various types, so that the full

description of their life cycles and varieties did not appear until 1881.

From that time on, most of Laveran's research and literary efforts were devoted to following up his discovery, and during the succeeding seventeen years he published four separate treatises on paludism, following these, in 1904, with a work on trypanosomes and trypanosomiasis. In the midst of these efforts, however, he did not neglect his military studies, as is shown by the appearance of a volume on military hygiene, in 1896.

His important discoveries were rewarded by his appointment as professor in the School of Military Sanitation, in Paris, where he was also elected president of the Society of Exotic Pathology, and made a member of the Institute and of the Academy of Medicine. His outstanding contributions to medical science were recognized by the awarding of the Nobel Prize, in 1907. He passed to his rest in 1922, at a ripe old age.

Without the labors of Laveran, those of Sir Ronald Ross, a British military surgeon in India, in discovering and proving the anopheles mosquito as the vector of malaria, would have been impossible or indefinitely delayed; and no one can say how long we would have had to wait for a Panama Canal, for much of the brilliant sanitary work of Gorgas rested upon Laveran's discoveries, as did also that of Golgi, Grassi, and others in

the prevention of the spread of malaria.

When one thinks of the hundreds of thousands—perhaps millions—of lives that were snuffed out by the ravages of malaria, before the time of Laveran, and of the countries, formerly nests of fever, which are now salubrious as a result of his labors, one must stop, at least for a moment, to offer respect and admiration to this earnest, sincere, and capable soldier and scientist of France.

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Our minds are composed of the digested essence of the thoughts and feelings of others.—ERNEST WOOD.

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### The Notebook Habit

**I**DEAS are elusive things, but they are the stuff of which real living is made, and if one does not learn to put salt on their tails and capture them, for future use or pleasure or both, one is apt to arrive at the downward slope of life's hill with little to show for one's journey.

We all have plenty of good ideas from time to time, but they are apt to come at what seem like inconvenient moments, as when one is shaving or dressing or combing one's hair or walking along the street, and unless one has a supply of the preservative salt ready for any occasion, they will flit away, nevermore to be encountered. That salt takes the form of a notebook.

Wherever the thoughtful man or woman goes, a notebook, along with a good reliable pencil, should be a constant companion, in a pocket or in the ubiquitous handbag, and whenever an idea comes into the mind, it should be immediately jotted down, no matter where one is, on a separate page. To wait for a more convenient time to do it is to lose the golden moment.

These jottings may be kept in the book or torn out and filed in a safe and handy place, and they should be *read over every week or two*. If they refer to something which is to be done, they may be destroyed as soon as the act is accomplished; otherwise they should be kept until they are worked out in some other way.

Every time these notes are read over a seed is dropped down into the subconscious, where it germinates in the dark, and sooner or later a plant of some sort will spring up into the sunshine of consciousness. When that happens, it, too, should be fixed on paper and attached to the original note, to be again considered from time to time. Thus each idea will grow and develop, as time

goes on, just as a great oak develops from a tiny acorn.

At the end of a year, one will be astonished to discover what a mass of material has accumulated. There may be the stuff for one or several articles, stories, or poems; a business suggestion that may be worth hundreds of dollars; the skeleton of a life philosophy; and heaven knows what else. Even though some of it does not seem presently useful, do not throw it away, for one never knows when some of these apparently useless jottings may prove to be just the thing one needs for some special set of circumstances.

In many instances, one really good idea has determined a man's success or increased his efficiency a hundred percent. In any case, the notebook habit keeps one on the alert for new ideas, new thoughts, and new combinations of them, and that means growth in knowledge, in personality, and in character.

Those who aspire to reach the good and satisfying places in life, no matter what their vocations may be, dare not wait and merely hope that the right idea will occur to them at the right time, but must acquire the habit of collecting ideas, sorting and classifying them, elaborating them after quiet meditation, and keeping them oiled and in good working order. Then, when the need for one arises, it will be ready to hand, and people will say, "What a lucky fellow! I wonder why I didn't think of that and do it."

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Thinking between practice is one of the most valuable means of learning.—JAMES L. MURSELL.

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### Be Yourself

**D**ID you ever notice that, no matter how incongruous the colors of a bouquet of flowers might sound, if you heard them described, they never clash when you actually see them together? That is because *natural* things, as God made them, are always congruous with each other. It is only when we get the idea that we can improve upon the work of the Almighty that we produce distressing combinations.

As long as a man is content to be *himself*, he will fit neatly into any group or society; but if this rule is to work out smoothly, he must be always his *best* self, not the crude rough thing that many are apt to think of in this connection. Most people are innately capable of far better things than ordinarily appear in their daily conduct.

The point is that most of us need to give a

great deal more study to our latent possibilities than is ordinarily given, and having found insufficiencies in the manifestations of our personal characteristics, we ought, at *once*, to set about the correction and development of our individual lives, for these are the only lives we have to live, for the time being at least, and any others which may probably be ahead of us will depend, to a very large extent, upon the way we lead these.

Good manners, while of course, superficial, are not an evidence of hypocrisy, but a wholesome recognition of the fact that we are social beings and owe something to the people who must associate with us, as well as a means for developing that true, inner *courtesy* which will make it unnecessary to think about our manners.

There is no reason in the world why we should strive to be something we are not, and when we do so strive we are sure to be found out and more or less despised for making such an attempt; but there is *every* reason why we should make a serious and intelligent effort to be just as complete and desirable human beings and members of society as we are capable of being, each in his own unique and individual way, and when we succeed in such an effort we will, in spite of the wide variations in the "colors" of human souls, be entirely harmonious members of any group of which we may be a part, just like the flowers.

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A good personality is achieved by practice, not by introspection.—HENRY C. LINK, Ph.D.

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### A Suggestion for Insomniacs

**N**O one (except perhaps, persons who live in a region where food is so scarce that opportunities for eating are few and far between, like the Kalihari Bushmen, of South Africa) would think of consuming an entire day's ration at one meal; but most of us are so accustomed to taking our twenty-four-hour quota of sleep in one installment, that we are considerably upset when, for any reason, it is or seems impracticable to do so.

On the other hand, most people in the United States eat at three fairly evenly spaced intervals during the day, and consider any other arrangement of meals as being abnormal, if not a bit barbarous.

Of course physicians realize that there are many persons who do or would get along much better if they divided their ration into four, five, six or more smaller parts and ate at shorter intervals. This condition is, no

doubt, somewhat unusual, but may be perfectly *normal*, for these individuals.

May it not be that thousands of the persons who are suffering, physically or (more commonly) psychically, from the effects of insomnia, are being forced into this uncomfortable condition by the prevailing custom of doing a day's sleeping at one session? Perhaps some of these sufferers might be better and happier if they took several smaller "meals" of sleep.

One man,\* at least, has found that such a rearrangement of his sleeping habits has given him the victory over disturbed slumber. For years he had been distressed by the fact that, no matter what time he went to bed, he would wake up after three or four hours and wear himself out in tossing and tumbling and worrying about his wakefulness. One night, in such a period, he decided that he needed a shave and proceeded to perform that matutinal toilet operation, after which he again retired and immediately fell asleep again. After some experimentation he definitely divided his night's sleep into two "meals" of three or more hours each, between which he got in two or three hours of fine, constructive work.

The middle of the night is a splendid time to read, study, or write, or even to do little odd jobs around the house, which otherwise might be neglected. Everything is quiet. There are no callers; no telephone bells; no interruptions of any kind. Moreover it seems, that when one is awake in the night one is more wide awake than at any other time.

Another suggestion is that, if one feels that one's regular "ration" of sleep has been insufficient, one might piece it out with a "lunch" (nap) at some time during the day. Many of those who find themselves overcome by uncontrollable drowsiness at mid-afternoon, and have demonstrated that this is not the result of an over-hearty luncheon, might find that this disagreeable condition would be promptly "cured" by spending half of the midday free hour in sleep, rather than (as is usually the case) in profitless babble that passes for conversation. Special individual circumstances should be given consideration.

The chief point of this brief discussion is to suggest that we might do well to revise our entire conception of sleeping habits, and consider it in a rational and individual way, as we are now doing in regard to the distribution of meals. By so doing we might be

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\*Robert H. Davis, in "Over My Left Shoulder."

of real assistance to some of the insomniacs, whose trouble has no physical pathologic basis, but who are, none the less, definitely "ill" because of it.

### Carry On the Battle

**A**RM Y Field Service Regulations contain the pertinent suggestion: "In making a march, it is well to pause occasionally and observe the route both ahead and to the rear." At this time of year, we too may do well to follow this advice. When the tuberculosis Christmas Seals make their annual appearance, we, as citizens, as well as in our capacity as physicians, should acquaint ourselves with what has happened in the fight against this dread disease—and what lies ahead.

For thirty years a voluntary army has mustered itself for duty in raising funds with which to carry on educational work in the public health field of tuberculosis control, to the end that a preventable and curable disease may be conquered. The march has been along a well-defined route, starting with Koch's discovery of the tubercle bacillus, in 1882, and passing such important milestones as the building of the first

tuberculosis sanatorium, by Dr. Edward L. Trudeau, and the inauguration of the first Christmas Seal sale by Miss Emily P. Bissell, in 1907.

For thirty years the battle has been waged, with ups and downs, until now we can see victory ahead. We must keep on. It is not enough that we have made progress to the extent of reducing the deaths from tuberculosis by more than two-thirds. There are still almost 70,000 people needlessly dying each year, and most important, the majority of deaths occur in that age group, 15 to 45, which is right at the door of economic independence and stability.

We cannot all be up in the front line with the fighters, but we do all have the opportunity of supporting the soldiers on the march. We can buy and use Christmas Seals, which finance the greatest war the world has ever known—a war that shall go on until this ancient enemy of mankind is controlled or destroyed.

We have come a long way, and we can look back with satisfaction, but we must look ahead with determination and with confidence in the tuberculosis associations of the country who have led the fight, and must

take our part in this great battle by buying Christmas seals this year.

#### NEXT MONTH

The January, 1937, issue will be our annual Medical Progress Number, which will be filed and referred to frequently during the year by thousands of physicians. Among the other important things it will contain will be a symposium on "Progress in the Science and Art of Medicine," by a number of prominent physicians, and Dr. Lake's report of the International Postgraduate Medical Assembly.

Dr. Czar Johnson, of Lincoln, Neb., will present, with clear and practical illustrations, a new and ingenious method of hernioplasty.

Dr. Theodore C. F. Abel, of Chicago, will discuss some of the newer and more important developments in laboratory diagnostic methods.

Dr. Mary G. Schroeder, of Elgin, Ill., will consider the recent progress in psychiatry.

#### COMING SOON

"Psychoses Associated with Endocrinopathies," by Edward Huntington Williams, M.D., Los Angeles, Calif.

"Benzedrine in Paranasal Sinusitis," by J. Allan Bertolet, M.D., Philadelphia, Pa.



## LEADING ARTICLES

### Deformities of the Sella Turcica: Pituitary Pathology

By J. S. Lankford, M.D., San Antonio, Texas

THE distinguished old anatomist held up a small bone that looked something like an airplane, made a profane remark about it, and laid it down. He went on to say that it required 4,500 words in "Gray's Anatomy" to describe its articulations, processes, facets, sinuses, foramina, grooves, depressions and fissures, and it was a waste of time to try to master it. The professor picked it up again, however, and described its upper surface, shaped like a Turkish saddle and called the sella turcica. Upstanding posterior clinoid processes lean slightly forward and anterior processes point backwards. "Lying on this upper surface," he said, "is a small, vestigial gland, remnant of an age long gone in the process of evolution. It is called the pituitary body, and so far as is known, has no function." That was fifty-five years ago. Such was the small knowledge we possessed at that time. Little was known of any of the endocrine glands.

What a mighty change has taken place! Now we know that the endocrine glands, with their marvelous secretions, lie at the very base of life, function, mind, and behavior. There can be no normality of body, mind or emotions without a well-balanced endocrine gland system. Personality and sanity, success or failure, deplorable misery or happiness, all lie here, especially in pituitary function. Experimental research and clinical observation have developed a vast fund of information concerning this great glandular system of the internal secretions. The wise Sajous taught that the pituitary is, not only the master gland controlling and directing the other glands, but is the center of sensation and emotion. Accumulated experience has proved this to be true, in a large measure. Nothing contributes so much to health, success, and happiness as a normally functioning pituitary gland, which has ample room for comfort and for the exercise of its magical power over life, function, growth, size, weight, figure, sex, mind, and personality.

#### Varieties of Sphenoid Deformities

Cushing and others have written much concerning abnormal states of the sella turcica, with reference to tumors and acromegaly, but there has been no adequate dis-

cussion of the minor but important deformities of this bony cavity and the pathologic results. Nature designed this peculiarly shaped upper surface of the sphenoid bone for the resting place of the important pituitary gland and for its protection, but there are many kinds of deformity that interfere with function and produce disease.

A good deal of variation occurs within the normal, but the sella may be unduly small, ill-shaped, thick, or thin; the posterior clinoid processes may lean too far forward; the anterior may project too far backward, and are particularly prone to point far downward, at an angle of 45 degrees. The clinoid processes may loop and meet above, and in some cases they clamp down with terrific pressure upon the gland; or the processes may be bridged across above. All of these limitations prevent the normal engorgement of the gland; the rise and fall of size, especially in women at the menstrual period, and during excitement or emotion in male or female. Some part of the floor or other part of the sella may be warped and pressing upon the gland, causing irritation or continuous pressure, with dire results. Erosion may occur in any part of the clinoid processes or other portion of the sella, setting up irritation. Constant pressure, from deformity or continuous irritation, may cause interstitial thickening of the gland, with consequent pressure lesions.

During fifteen years of careful observation, many different deformities have been seen and their associated disease conditions studied. It is desired to mention four classes of symptom groups arising from these minor but important deformities: Those leading to change in form and size of the body; those causing pituitary headaches, and some cases of migraine; those leading to peculiar types of nervousness and emotionalism, abnormal to the border line of insanity, especially dementia precox; and last, and perhaps most important, those creating certain diseases of the eye, even to the point of blindness.

The anterior pituitary is the organ of growth. If this gland is normal and active, and the sella ample, the body will be well developed and the figure good. If the pituitary is small and inadequate, the stature

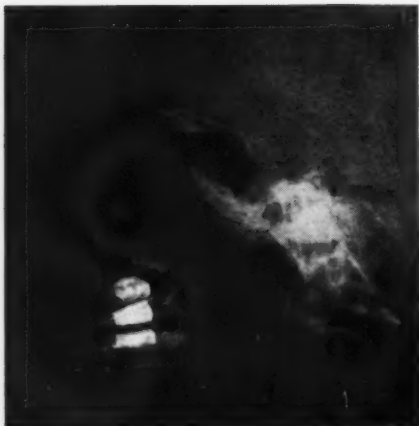


Fig. 1

may be slight, even to the point of dwarfism; but, on the other hand, if there is irritation and overstimulation of the gland by pressure from an abnormal sella, gigantism may occur. The body may take all sorts of shapes and forms, according to the insufficiency or activity of the gland. Pituitary headaches, violent pain through the temple, brow, eye, and occasionally the top of the head and the postoccipital region, quite commonly arise from a deformed or small sella, with pressure. Even some cases of migraine, that bane of the patient and the physician, are due to the same cause.

Pressure from sella deformity may lead to peculiar forms of nervousness and emotionalism, with despondency and a suicidal tendency; to all kinds of peculiar and unusual behavior; and to queer, stuporous spells. Perhaps most important of all, pressure from an abnormal sella upon the pituitary and contiguous structures, the blood vessels and nerves, not infrequently causes diseases of the eye, threatening vision; cataract, juvenile glaucoma, retinitis pigmentosa, neuroretinitis, neurochoroiditis, amblyopia, and even conical cornea may be mentioned. Any part of the eye may become inflamed and vision greatly impaired.

Some excellent results have been obtained, in a number of such cases, by pituitary and synergistic treatment, proving the etiologic relationship. Some failures have occurred, when treatment was begun late. Well-directed treatment may, not only relieve many of these various conditions, but may change the whole course of a life.

The causes of deformity of the sella turcica are probably operative in the fourth to the eighth week of embryonic life, when the endocrine glands come upon the scene. It is

easy to believe that these deformities may be the work of transmitted syphilis from the mother, or to other hereditary difficulties, or to various forms of infections in the mother's blood during this critical period; even improper foods, lack of vitamins, poor nutrition, and other environmental influences might be very powerful at this early period in the life of the embryo. The extremely delicate structure is warped and changed until the whole future life is affected. Here, at this time, is laid the strange, uncertain foundation for future life and character, ill health and suffering, or the magnificences of a great life.



Fig. 2

#### Treatment

The best treatment of these various conditions is along the line of pluriglandular therapy, administered orally, or sometimes, for quick results, parenterally. The wise combination is the one that comes nearest to meeting the deficiencies and excesses. In practically all cases, pituitary tablets (whole gland), one grain (64 mg.) each, have been given three times daily, or in that same dose with other glandular products. If the blood pressure is very low, certainly suprarenal substance must come into the combination, for this secretion governs body temperature, blood pressure, and other functions. If basal metabolism is decreased to any notable degree, moderate doses of thyroid are used—1/10 to 1/4 grain (6 to 16 mg.) three times daily. If there is evidence of hypoparathyroidism, with impaired calcium metabolism and calcium deficiency, a peculiar form of discontent and restless nervousness, with spastic pain about the pyloric end of the stomach and the duodenum, 1/10 grain (6 mg.) doses of parathyroid substance are

given, along with calcium gluconate. Always, in deficient vitality, the gonadal combinations are advisable. It is important that polypharmacy be avoided and not too many of these remedies be given at the same time. An alternating plan is better.

In nearly every case it is well to keep in mind widespread inherited syphilis as a causative factor. At any rate the blood is usually found impaired—a low leukocyte count; insufficient red cells; deficient hemoglobin—and a pill or tablet of iodide, mercury and iron compound will be helpful. This has a tendency to promote absorption and to relieve the engorgement of the pituitary; correct interstitial thickening; and keep up a gentle stimulation of the liver. Quite commonly a capsule for the relief of headache, containing 1/10 grain (6 mg.) of calomel; 1/2 grain (32 mg.) of extract of hyoscyamus; and 5 grains (325 mg.) of acetylsalicylic acid, has been used freely, as required.

The question may properly be asked, how this treatment relieves, and even cures some cases. Constant irritation or pressure sets up chronic engorgement and interstitial disease of the gland, it becomes too large for its bed, and this increased size and deformity of the sella may cause pressure upon contiguous nerves and blood vessels, even those supplying the eye, and play havoc. The pituitary is incapacitated; but by substitution of its own secretion; by stimulation by the other secretions, as required; and giving small doses of mercury and iodide, we may facilitate the circulation, reduce size, take off pressure, restore function, and relieve secondary symptom groups. Reports of a few interesting, illustrative cases are appended.

#### Case Reports

**Case 1.—Overgrowth of long bones, tending toward gigantism.** A. P., female, age 12; 5 feet, 2 inches tall; weight, 66 pounds. Her father died of locomotor ataxia. Overgrowth of the long bones was very pronounced—arms gorilla-like. She had suffered constant and violent headaches, through the temples and brow, for two years. There was no history of any infectious disease. The pupils responded to light fairly well, but the response was more limited in accommodation; the left pupil was larger. Decided lymphocytosis was observed. X-Rays revealed the clinoid processes looped over and tightly compressing the pituitary gland (see Fig. 1).

She was given whole-gland pituitary tablets, changed occasionally to thyroid-ovarian compounds, with small doses of iodide and mercury, with the capsules mentioned, as required for headaches. Improvement started immediately. Headache was controlled in six weeks and never returned. Growth was arrested, so that she grew only four inches more until she was fully grown. She put on forty pounds in weight and attained ex-



Fig. 3

cellent health. A most interesting thing is that the x-rays, seven years later, showed the clinoid processes in a normal position (see Fig. 2).

**Case 2.—Pituitary headache:** Mrs. O. K., age 58, suffered agony for more than three years without relief, most of the time in bed with the room darkened. She has had one child, born dead, was much troubled with indigestion, gases and constipation, and insomnia was troublesome. Her blood showed leukopenia and lymphocytosis to an important degree. Her pupils responded normally to light and accommodation; vision 20/40 minus, in both eyes. Pluriglandular inefficiency was marked, especially of the pituitary. Her deep reflexes were sluggish. X-Rays showed the sella turcica very small and inadequate (see Fig. 3).

The patient was given pluriglandular therapy, stressing gonad, thyroid, and pituitary extracts, along with iodide and mercury in small doses, and headache capsules sufficient for relief. She experienced much relief immediately, made a complete recovery after about six months' treatment, and has had no return of the trouble for about three years.

**Case 3.—Retinitis pigmentosa** (referred by H. L. Hilgartner): W. H. A., male, age 63, 5 feet 9½ inches in height, weight 156 pounds, married, complains of vision impaired nearly to the point of blindness. His mother, father, and one uncle had cataract; three brothers are color blind; and all suffer with night blindness. The patient has been color blind and night blind since early boyhood. He had suffered much with headache, insomnia, and nervousness; had had hay fever for over forty years; his teeth decayed early, and he developed serious pyorrhea and had all teeth extracted two years ago. For a number of years, in boyhood and early manhood, he passed large quantities of colorless urine, and was always sweating heavily about the heels and feet, rotting his shoes. His blood pressure was at the unusually low point of 90/70;



Fig. 4

leukopenia and lymphocytosis were both rather marked; the Wassermann reaction was negative; deep reflexes, subnormal; the pupils appeared rather contracted; the field of vision was considerably limited in the upper and outer periphery in both eyes, and vision was so much impaired that he could not go out alone. X-Rays showed the sella turcica extremely small; the clinoid processes overlapping; no erosion (see Fig. 4).

He was given pituitary tablets, whole gland, one grain (64 mg.) daily, along with small doses of thyroid, changed from time to time; but most important of all, suprarenal substance was pushed to bring up the blood pressure. Pill iodide and mercury compound was given, and ultraviolet ray treatments used to full tolerance. The patient made rapid improvement physically; his hay fever and headaches disappeared entirely; he gained twenty pounds in weight in a month, regained good health, and was able to read the big headlines on the paper, but was not permitted to do so. Improvement continued until he was in excellent health in six months, with sight fully restored so far as he could tell, and he was using his eyes freely. The eye grounds were vastly improved—evidence of the retinitis reduced greatly and the spots fading, so that they were unnoticed by the patient. At the end of a year, all this improvement is maintained, but one cannot be sure that it is permanent.

**Case 4.—Pituitary neurosis with amblyopia** (referred by H. L. Hilgartner): W. G., female, age 12 years, having high blood pressure and apoplexy in the family history. The patient was extremely nervous and emotional, crying almost constantly without knowing why; and she was nearly blind. She had never had a severe illness, but had been much subject to colds, indigestion, and constipation. There was no abnormality of the heart or kidneys, but a decided leukopenia and moderate eosinophilia. The patient was depressed to the point of despair. X-Rays showed the sella turcica very thin and ill-shaped.

She was given thyroid and pituitary extracts, along with the hematonic pill. In two months the functions were good, the blood was corrected, and the patient was feeling fine and happy—emotionalism gone and vision restored to 20/20 in both eyes.

**Case 5.—Psychasthenia with pluriglandular inefficiency and low blood pressure** (sella assumed to be normal): W. W., male, age 27, a law student, single, under extremely heavy strain in his studies, suddenly collapsed—was extremely nervous and restless and wholly unable to think, with decided insomnia and obsessed with numerous phobias. He could not stay at home alone; could not go to church or the theater or even on a crowded street; was trembling, nervous, and apprehensive. Leukopenia and lymphocytosis were marked, and there was considerable hyperglycemia. He was perfectly helpless, physically and mentally, and was despondent to the point of suicidal tendency.

With moderate doses of thyroid, pituitary, suprarenal, and gonad substances, and with psychotherapy, this patient made a perfect recovery in six months and has been well for a year, in splendid health and vigor, with normal mentality.

Scores of cases of many kinds could be reported, but these five will give some idea of the various conditions and the treatment. In more than fifty years of varied professional life, the diagnostic study, the treatment, and the relief of these symptom groups have been incomparably the most interesting and inspiring experiences of all.

901 Cambridge Oval.

#### HUMAN INEQUALITIES

*The inequality that men hate is the kind that dooms one man forever to rank as an inferior, no matter how superior he proves himself.*

*That is the age-old inequality of rank and caste that still survives in many lands, and true liberty is impossible where it prevails.*

*Americans are unequal. And as long as human nature remains as it is, the superior will use their advantage selfishly. What is more, the snobbish and fearful will hasten to serve and humor those whose wealth gives them power.*

*But every mother's son of us can hope to win the rank and prestige to which his abilities and industry and luck entitle him, and that is the kind of freedom and equality that counts.*—ROBERT QUILEN, in *Fountain Inn Tribune*.

# Neurasthenia and Unreasonableness

By D. J. Hayes, M.D., San Anselmo, Calif.

IN the stress and strain of this nerve racking age, where the strongest are often forced to the wall, we pause, occasionally, to take inventory, to compare gain and loss.

The evils inherent in our strenuous, modern civilization are becoming the subject of more scientific study—a subject that is interesting many, outside the medical profession, for it is a social, industrial and moral, as well as a medical, problem.

It is more than fifty years since Beard described that complex of disorders to which he gave the name neurasthenia, or "nerve tire." He directed attention to the importance of the nervous system as the regulator of bodily functions, and showed the disorders resulting, where this regulating mechanism was disturbed, to be as numerous and varied as those functions.

The emotional stresses, the perplexities and discouragements of life, are the outstanding factors in these neuroses, and the physician has given them scant attention. They have been relegated to the Christian Science and other cults, which offered the patient something that appealed to his needs.

The disorders of neurasthenia are not to be put aside by calling them imaginary, or attributing them to the "willfulness" of the patient. Such an attitude reflects upon the doctor's intelligence. We are dealing with a real disorder, or rather a complex of disorders, that are as clearly demonstrable as any arising from purely physical causes.

We have been disposed to trace all ills to a physical source, forgetting that there is another side to the individual. The influence of mental states, while recognized, is practically ignored. We know the physical inaction that attends discouragement; that the discontent and feverish worry of our daily tasks are sources of tire, greater by far than the work performed; but, in practice, we have been disposed to underestimate their importance. They lacked tangibility—could not be weighed nor seen under a microscope—though evidence of the harm done was everywhere to be seen.

What strikes us most forcibly about this killing nervous strain is its unreasonableness and its universality. We each recognize it in the other. The physician has suffered no less than his patient, the rich as well as the poor. It has been, and is, strikingly evident in the methods of treatment ordinarily pursued. Entertaining many false notions respecting the nature of our ailment, we pursue a course, almost invariably, that but serves to aggravate it. Looking to symptoms which we misinterpret, while overlooking the underlying trouble, our false conclusions are attended

with worry and anxiety, and our misdirected efforts end in discouragement and hypochondria. The same causes that gave rise to the trouble operate to perpetuate it. Old worries are abandoned only to take up with a new one—our health.

In dealing with our own ills we are disposed to put the cart before the horse, saying, "If my stomach were better, my nervousness would be better," when it is manifestly true that the stomach derangement is but a symptom of the nervous tire. Our own unreasonableness, as the basis of nervous strain, is the last thing in the world that we are willing to admit, and there is nothing so common.

Much of our treatment possesses no scientific value, and depends for its merit wholly upon the temporary faith aroused. The eminent Doctor Osler said, some years ago, "Put all the musty tomes of the Pharmacopeia in one scale of the balance, and faith, simple faith, in the other, and the musty tomes will kick the beam." It is as important in the physician's prescription as in the magical cure of the faith healer. This does not deny the value of rational medicine, but emphasizes the importance of confidence and courage, and the evils of morbid fears and pessimism. The number of cures by "faith" is the best evidence of the rôle that the emotional states play—and we are not dealing with simpletons. The more intelligent people are as "suggestible" in respect to treatment as the ignorant.

Faith is good, if it be rational. An unreasoning faith, however, which renders us passively obedient to arbitrary authority, is always an evil. To correct some imaginary fear, or to kindle courage by a "suggestion" that the patient blindly accepts, is not to cure.

The recognition of the part that mental states play is essential to any preventive program, but the methods of "suggestion" must give way to scientific principles and a rational therapy. The physician must be a teacher, and all he needs is to tell the truth and discard "claptrap." What folly to say to the nervous patient, "Don't worry," or tell a discouraged man to "cheer up and be an optimist," or to "think happiness." Our cut and dried advice is not only futile, but objectionable. We tell nothing—a case of the blind leading the blind. We are dealing with unreasonableness, which such methods only serve to foster. Optimism is a healthy outlook, not to be acquired by simply making up one's mind. Self-mastery is bottomed upon understanding.

It is a better knowledge of ourselves that



we need, based upon our observations. The confidence or faith thus engendered is not a blind confidence in the physician, nor confidence in any of the flimsy methods of "suggestion," but a healthy confidence in one's self that is unshakable. It is an appeal to common sense, the appreciation of our everyday experiences.

It is a difficult task to enter into the life of the patient, with his well-established prejudices, and give him a new outlook on his ailment, the truth of which may be demonstrated in the patient's own experience. It demands tact and almost infinite patience, but the results are gratifying. One thing it is necessary to make clear—that normal worry, fear and other emotional states are in no wise injurious to health. It is the persistent belief in what is false that works the mischief, and this unreasonableness has but one explanation—lack of proper education. It is to this unreasonableness and the resulting fatigue that the physician must direct attention. Wrong education put it in; right education must take it out. He must prove his case, confirming his statements in the patient's own experience. He will find an interested listener who will accept this proof as a revelation, and having won his cooperation, it is possible to tell him the plainest truths without offending him. One only needs to be honest and have a wholehearted interest in and sympathy for one's patient. It is no reflection on his character to charge him with unreasonableness. No man is without his prejudices, especially those pertaining to matters of health.

Many deplore the condition of the times because the world refuses to be saved according to their formula. One nerve specialist recently stated that the world was going insane. The fact is, this old world has been insane, but we are growing into sanity. The increased prevalence of "nervousness" that characterizes our age, is but a symptom of a passing order. We are growing away from old delusions to a better understanding of men and things. It is not what we have had to learn, but what we have had to *unlearn*, that has hampered our progress.

Tired and sick, in mind and body; misunderstanding and misunderstood, the nervous patient is frequently criticized for his morbidity, by people who are probably as morbid themselves. The patient is unreasonable, it is true, but who of us is reasonable? And how is this unreasonable disposition established? One thing may be set down with certainty: We do not bring hurt upon ourselves intentionally. Nobody goes crazy on purpose.

In dealing with human faults, nothing so surely betrays our own weakness as intolerance. We have not realized how closely

allied is this unreasonableness we criticize to insanity, and that our intolerance is but another phase of the arbitrary disposition we condemn. We do not see that we are dealing with sickness, until, perhaps, some great catastrophe has occurred.

The man who entertains a prejudiced opinion, whether in regard to his ailment or in a matter of morals, is a slave to that opinion—dominated and controlled by it. He is free to act upon his wrong judgment, if that may be termed freedom. Our will merely registers our decision. It does not originate acts.

There are many remedies for existing ills, many of them of the "quack" variety, but there is a strong undercurrent of sane endeavor that is slowly but surely bearing us on toward truth. Progress has been compelled. The exigencies of our lives have forced us to think, to see the necessity for our acts, that nothing happens by chance, and that, to a well-balanced mind, right action is only intelligent action.

The physician can no longer ignore the mental phase of the nervous condition. Instead of empty platitudes, he must appeal to the patient's intelligence. We are dealing with unreasonableness, and we must point out the cause, as diplomatically as we can. The patient must be taught to think for himself, in matters that are strictly his own affair and where, for good or ill, he must decide. When he learns to trace his troubles back to himself, his experiences may be reckoned as assets and a wholesome optimism established, not in assuming that all things are right in the world, but through a better adaptability and a better understanding of the conditions which he has to combat. Thus confidence will be developed, and he will find joy in the struggle.

If we would serve God, we must be happy and be thankful. This is man's whole duty. Be your own independent self. In your dealings with others be an honest diplomat. Do not attempt to upset their prejudices too rudely. You may not be able to help, but justice demands that you be tolerant. Your own welfare demands it.

With an interest in work for the joy of work and the rewards that come from toil, not simply a mad strife to feed our vanity; with a healthy spirit of play, a wholesome sense of humor, and a right understanding of our fellows, we are prepared to realize life's golden possibilities. Unreasonableness demands a heavy toll.

There is only one true freedom—the freedom to think and to know. We have "known" much that is not true, but discussion and the lessons of experience have brought man a long way on the road to civilization. There is an air of freedom in the times. Many are

being hurt, but we are no longer content to suffer and blasphemously say, "It is the will of God." We are asking why it is so. The oncoming generation is thinking and is no longer satisfied with platitudes. We are learn-

ing how to live. All we can do, in a general way, is to contribute our mite of sane and wholesome education, and find our satisfaction in so doing.

## Toxemias in Carcinoma of the Colon

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**T**OXEMIAS occurring in carcinoma of the colon may be classified as the usual toxemia, if I may be permitted to use this term, that is associated with severe carcinomas throughout the body. This form of toxemia is present in all these cases and is indicated by the peculiar lemon tint of the skin, marked anemia, extreme weakness, and quite often, an effusion of peritoneal fluid that has a tendency to dissolve gut suture material. Consequently, a number ten, braided silk thread is used to suture through and through the abdominal wall tissues.

In a large number of these cases of long duration, I firmly believe that kidney dysfunction will be encountered. In the remainder, a toxemia is found that affects the liver function. In this instance, again, the blood-chemistry test furnishes the necessary indication of this condition, which also holds true in toxemia complicating diabetes, as well as those cases in which the raw surface of the colon, through its connection with the mesentery, has a tendency to institute inflammatory and even pustular areas. This affection is ascertained by a positive blood culture. These facts indicate that any attempt to perform a radical operation of any kind on the colon, in the presence of a severe toxemia, will tend to further endanger the life of the patient.

The patient is prepared for operation according to the joint decision of the internist and the roentgenologist.

### The Water Balance and Dehydration

Coller and Maddock<sup>1</sup> believe that a fairly accurate calculation of the amount of fluid required to maintain a satisfactory water balance in the average patient can be made by making proper allowance for abnormal losses, such as vomitus and drainage from fistulas, which should be carefully measured and recorded on the patient's chart, and about 1500 cc. of fluid devaluation for micturition. Allowance of from 1000 to 1500 cc. per day should be made for evaporation from the skin and lungs, in the simple uncomplicated surgical cases, and a reduction in water content, averaging from 1500 to 3000 cc., or an approximate amount of 2000 cc. per day, for

the possible increased heat production of fever due to hyperthyroidism or sweating attendant upon a hot or humid environment. A 3000 to 3500 cc. fluid devaluation must be considered in the average patient, figuring according to the three avenues of escape mentioned above, as estimated by Coller and Maddock, and additional allowances should be made for the dehydrated patient.

Freyberg<sup>2</sup>, Gamble<sup>3</sup>, Lashmet and Newburg<sup>4</sup>, Keith<sup>5</sup>, Balcar, Sansum, and Woodyatt<sup>6</sup> have all contributed important material relative to dehydration and water balance. Although dehydration and toxemias accompany some cases of carcinoma of the colon, and the identical abnormal blood-chemistry findings are seen in a number of patients having this affection, surgeons have shown little inclination to follow the teachings of these men.

A ten-percent loss of body fluid is incompatible to life unless replaced, according to Balcar, Sansum, and Woodyatt<sup>6</sup>, Nothwang<sup>7</sup>, Keith<sup>5</sup>, and Rubner<sup>8</sup>.

Coller and Maddock have demonstrated that a six-percent loss of fluid weight, in terms of body weight rather than the total percent of water in the body, is the beginning of serious dehydration. They estimate that the total water content of the body amounts to about 65 percent of the total weight. These two writers have shown that the blood nonprotein nitrogen was increased in patients evidencing a dry tongue and scanty urine, which indicates the beginning of serious dehydration.

Dr. Oliver Kamm's address before the New York section of the American Chemical Society, on February 7, 1936, cast a revealing light on the control of water metabolism of the human body by the thyroid, suprarenal, posterior pituitary and anterior pituitary glands. As is often the case, this great scientific discovery was established virtually by accident. Some years ago, a Netherlands physician, seeking a new method of treatment for diabetes insipidus, tried the experiment of administering pituitary gland extract to the patient, which afforded the sufferer temporary relief. This was one of the initial steps in acquiring the general knowl-

edge of the subject now commonly accepted.

According to Dr. Kamm, careful research on experimental animals and human beings, who volunteered for tests, established the fact that the beta hormone of the posterior pituitary gland was the substance that corrected the disarranged water metabolism in diabetes insipidus. His theory as to the physiologic method by which the hormone does the work is that the gland secretion, in passing through the blood stream, acts through the medium of a nerve mechanism upon the cell walls of the body tissues. He believes that the hormone's action alters what may be termed the transmission quality of the cell walls, and alters and balances the mineral salt concentrations in the body fluids, bringing about the distribution of water at the proper rate and in the proper direction for the chemical health of the human body.

John Killian, formerly associated with Victor Carl Myers, of our blood chemistry laboratory, and Ludwig Kast<sup>9</sup>, on our medical service, reported, at the early date of 1918, that the blood chemistry picture of moderately severe nephritis is seen in many cases of abdominal malignant tumors. Since these observers have verified the frequent association of impaired kidney function with abdominal cancers, constant alertness should be exercised for the detection of this complication.

#### Kidney Function Tests

There are three tests which are most accurate for the determination of kidney dysfunction or renal efficiency: (1) The Lashmet and Newburgh method,<sup>10</sup> for concentrating ability; (2) the urea clearance test of Van Slyke, for urea excretion; and (3) the fifteen-minute phenolsulphonephthalein excretion technic of Chapman and Halstead, to measure the efficiency of dye elimination.

Mosenthal and Bruger reported that the urea ratio is a satisfactory index of renal efficiency. They believe that the urea ratio is a correct indication of kidney function, despite the fact that the concentration of both urea and nonprotein nitrogen are within normal limits in the blood. Their report indicates an excellent agreement between the urea ratio and the urea clearance.

To Folin, Benedict, and Van Slyke must be conceded the greatest credit for the accuracy of the data on the chemical composition of the blood, especially of the nonprotein fraction, which is primarily the result of American observations and methods. Victor Carl Myers, a pioneer in blood chemistry, made important observations in this field since 1912, when the advance was very rapid in this work. He made the following statement in his textbook: "It is difficult to draw an arbitrary line indicating where normal findings end and pathological findings begin, but

it is believed safe, when the blood is taken after a fourteen-hour fast, in the morning before breakfast, to regard a urea nitrogen above 20 mg. as quite definitely pathologic, a normal urea being 12 to 15 mg. per 100 cc. of blood. The normal sugar content, averaging from .09 to .12 percent, is elevated to .15 percent; the CO<sub>2</sub> combining power—45 under normal conditions—approximates 50 to 75 per 100 cc. of blood; creatinine 3 to 5 mg. (normal, 1 to 2 mg. per 100 cc. of blood); the normal 4 mg. of uric acid is changed to from 2 to 3 mg. per 100 cc. of blood; the normal 35 mg. of nonprotein nitrogen, averages 25 to 30 mg. per 100 cc. of blood in this condition; cholesterol, 0.19 percent (normal, 0.14 to 0.17), chlorides, as NaCl (+ 0.52 percent normal), change to 0.45 to 0.50 percent."

The toxemia arising in cases of malignant disease of the colon presents a blood chemistry picture identical to the one evidenced in moderately severe nephritis. Consequently, the preoperative treatment is similar to the one used for prostatic obstruction cases, in which the blood urea has been found to be a valuable preoperative diagnostic test. Cases showing urea nitrogen figures of 20 mg. per 100 cc. of blood may be regarded as good operative risks, in so far as the kidneys are concerned. However, when the urea nitrogen figures rise to 30 mg., considerable caution should be exercised and preliminary treatment instituted. Urea nitrogen figures above 30 mg. per 100 cc. of blood afford a good indication of renal involvement and present a poor operative prognosis.

#### Medical Treatment

Following the roentgenologist's diagnosis in malignant disease of the colon, I believe that such cases should be immediately placed under the supervision of a competent blood chemist and internist. It is the duty of the internist to verify the fact that the results of the heart and chest examinations of these patients reach a satisfactory standard, and he should order whatever control diets he deems necessary. I advocate either the lemon or banana diets given by Myers<sup>11</sup> in severe toxemias where the nitrogen intake must be reduced.

The blood specimen should be collected each morning before breakfast. After a careful computation, an estimation is made of the amount of fluids to be administered each day to the patient. This will result in increasing the output of the kidneys and decreasing the toxemia, which will be verified by a reduction of the blood urea. The duodenal drip method, devised by Joseph F. McCarthy, director of the urological division of our hospital and his coworkers, fifteen years ago, was one of the greatest advances in the reduction of urea. In those cases com-

plicated by a toxemia, a urologist is required to institute drainage of the bladder by inserting an indwelling catheter.

Toxemia may originate in carcinoma of the bowel, not only from partial obstruction, but also from ulcerating surfaces in this area, which is particularly characteristic of neoplasms involving the right colon.

When a serious kidney dysfunction is indicated by an unusual increase of uric acid, urea, nonprotein nitrogen and creatinine, the fluids, to be introduced per rectum, should be measured in quantities of liters rather than centimeters. Tap water and 5-percent solutions of dextrose should be used. Physiologic or hypertonic salt solutions are administered only when the blood chemist notes a deficiency of the chloride content in the blood. The 5-percent dextrose solution is given intravenously by clysis, and also by the duodenal drip method. Massive quantities of this solution should be injected until there is a noticeable change in the blood picture of the patient and a restored kidney function. Consideration of the patient's temporary discomfort is secondary to the possible development of edema of his extremities and his need for rest and relaxation.

The blood-chemistry estimation each morning serves as an indicator for further treatment. No hesitation should be shown by the physician in charge to order massive blood transfusions, in these cases, when the presence of kidney dysfunction, low hemoglobin, and the characteristic weakness of the patient are in evidence. The amount of the transfusion varies from 750 to 1000 cc. and should be repeated three or four times at proper intervals. The benefit derived by the patient from these massive blood transfusions has never been fully appreciated by many surgeons.

If the blood chemist presents a favorable report in these cases, primary operative intervention is then considered. In all cases, disregarding the exact location of the lesion, with the possible exception of the cecum, a preliminary cecostomy is performed under local anesthesia, supplemented by cyclopropane and tracheal inhalation with the Magill catheter. This operative step causes the loss of a considerable amount of fluid, which necessitates a careful check-up of the amount lost and its prompt replacement.

Kidney dysfunction, indicated by a marked decrease of urine having a high specific gravity, and a twenty-five to thirty percent increase in uric acid, urea, nonprotein nitrogen, and creatinine, is encountered in prostatic obstruction and chronic malignant tumors of the colon. It is also associated with other conditions, particularly in their terminal stages.

When scirrhus carcinoma affects the transverse and left colon, the blood chemistry picture may not change until a more or less obstructive condition exists and mild progressive toxemia becomes manifest.

One of the most serious forms of long-standing carcinomas of the colon is the diarrheal type, with which is generally associated a complication of acidosis. Consequently, active treatment is directed toward the eradication of the latter symptom. Under ordinary conditions, the kidneys are able to secrete an acid urine from an almost neutral blood, through the medium of acid phosphate, which constitutes a secondary means of defense.

In their investigations almost twenty years ago, Marriott and Howland<sup>12</sup> demonstrated that this is just the factor that breaks down in the acidosis of nephritis. They discovered that inorganic phosphates of the blood serum increased to many times the normal amount in nephritic acidosis, although nephritic cases without acidosis did not show evidence of this change. Other means of defense against acidosis are the blood and body proteins that are capable of assimilating considerable amounts of acid without a marked change in reaction, and have an added ability of forming an alkali; i.e., ammonia. The latter process is of considerable importance in the acidosis of pernicious vomiting.

The normal carbon dioxide combining power of blood plasma is 77-53 per 100 cc. of blood; in mild acidosis, it is 53-40; in moderate acidosis, 40-31; and in severe acidosis, it is below 31.

When the beginning of toxemia in carcinoma of the colon is indicated by moderate increases in the blood chemistry determinations, obviously the amount of fluid for injection cannot be limited to a specific quantity. In these instances, the blood chemistry study is the only reliable guide. Calculations should be made in liters rather than centimeters in the more severe cases.

#### Surgical Treatment

Since operative resections form the second cause of high mortalities in malignant disease of the colon, I humbly submit my precept regarding this procedure, which is: Never utilize an operative technic which includes the double clamping and severing, by the scalpel or actual cautery, intraperitoneally. Naturally this advice reflects on nearly every operative technic that has been described for this condition during the past fifty years, with the exception of the one presented by Paul and Mikulicz. I prefer the use of the Paul-Bloch-Mikulicz operative procedure, as suggested by Lahey, for the removal of the right colon. However, my operative procedure varies from this method,



since no sutures are used through the walls of the bowel to connect the four inches of the wall of the ileum and transverse colon to form the colostomy. Instead, the fringe of the mesentery is used for the attachment to the ileum and the fringe of the omentum to join it to the transverse colon for suturing purposes.

Rankin, Graham, and their associates, of the Mayo Clinic, reported a low mortality resulting from the first step of their operation, which was a modification of the Friedreich technic for resection of the right colon and a preliminary anastomosis of the ileum to the transverse colon with the aid of the Rankin clamp. Many surgeons prefer the Friedreich resection, including the lateral anastomosis in one stage, with or without an ileostomy, for carcinoma of the right colon.

For several years I have used the term, new Paul-Mikulicz operative procedure, to differentiate it from the old eventration operation. Usually, a Paul-Bloch-Mikulicz operative procedure can be utilized in all other parts of the colon. Should a permanent colostomy be necessary, my aseptic operative technic<sup>13, 14</sup> may be used for resection of the growth occurring in the lower sigmoid, sigmoido-rectal, and rectal areas. In carcinoma of the lower rectum, a preliminary cecostomy should be performed with a proper work-up, to be followed by the perineal tunnelling operation advocated by Allingham, and the proximal edges of the rectum and skin joined together, proper drainage being instituted as a last step in the procedure.

In brief, colonic surgery resolves itself into the preliminary cecostomy (or, in some exceptional cases, ileostomy), and the new Paul-Bloch-Mikulicz type of operative procedure as far down as the lower sigmoid, to be followed by my aseptic operative technic and the tunnelling perineal resection of Allingham for the remainder of the area.

I advise workers in this field of surgery to set up their charts for intake and output of fluids of the body; to have the blood chemistry determinations made each morning before breakfast; and to utilize a preliminary von Schilling blood count as a basis for

comparison with future blood counts, which can be made fairly often in the event of an emergency.

Abscesses are frequently encountered in the mesentery bordering on the growth. Unusual as it may seem, operators who utilize the radical intra-abdominal resections of the colon report that their mortality rate is lower in these cases.

Many surgeons administer intra-abdominal injections of vaccines or amniotic fluid pre-operatively, and report favorable results. In the more advanced cases of cancer of the colon, which are definitely inoperable, a palliative colostomy can be performed according to my technic<sup>15</sup>.

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### RATIONAL TREATMENT

Disease is not an entity, something to be expelled from the body, but is a method of life. It cannot be purged from the body, vomited from the stomach, strained from the skin and kidneys, or exorcised by counter-irritation. Such means may do good when they remove offending substances, or establish a function that is deficient, but they should have a rational use.

—DR. J. M. SCUDDER.



# The Diagnostic Value of Signs and Symptoms

By W. L. Kitchens, M.D., Texarkana, Tex.

WHEN we examine a patient and find and make a list of certain abnormal actions and pathologic changes, called signs and symptoms, or the history, all that we should expect to know is that the patient is sick and is suffering from some of the more than six hundred diseases that affect man. In order that we may recognize the disease present, there are two things that we must do: we must find sufficient evidence of the disease; then we must be able to make use of the full diagnostic value of this evidence.

The diagnosis of a disease, for the purpose of treatment of the damage it has done in the living human body, is the same procedure as the trial and conviction of an individual, for the purpose of punishment, for damage he has done in our social life, in that we must have evidence of some nature that will make us suspect certain diseases or individuals; then we must have sufficient evidence from which we may select or eliminate a disease or acquit or convict an individual. In both procedures, we use direct and circumstantial evidence.

Diagnosis consists of two sections, the first of which is an art and has nothing whatsoever to do with this paper, for it pertains to the examination of a patient for the purpose of detecting the things gone wrong, either functionally or organically. This part of diagnosis belongs in the teaching of our medical schools and should constitute their sole diagnostic purpose. The second section of diagnosis is now a science, and consists of the analysis of the diagnostic value of the signs and symptoms found during the examination of a patient.

Dr. Manson once said, "The secret in the diagnosis of any disease is to suspect its presence," and this statement has been repeated many times by the authors of our textbooks and other books on diagnosis. A secret is something hidden; something private; something mysterious; or something kept from general knowledge. Is there such a thing as a secret held in the minds of certain diagnosticians, who will not pass it on, through the literature, to their fellow practitioners? The many theories, -isms, and -pathies have their origin in the treatment of diseases, not in this supposed secret. There is nothing mysterious or hidden in diagnosis, for any physician who is able to detect abnormal actions and pathologic changes in the living human body, and who can make use of the full diagnostic value of the signs and symptoms found, must suspect the presence of any and all diseases that may be affecting his patient.

The signs and symptoms produced by disease represent damage done to the action of certain body tissues or to the tissues themselves, and are not descriptive of a disease, in the sense as we would describe some material object, as by saying a "large-two-story-brick building," or a "black-and-white-spotted horse." If this were true, then diagnosis would be a very simple matter, and we could recognize the disease, itself, instead of merely its presence, at the very moment that it makes its attack against man. As it is, many days are often required for a disease to produce sufficient evidence for its recognition, and many of us are rather slow in the recognition of these damages because we were not properly taught this art, for we had to spend most of our time while in medical school trying to commit to memory the diagnostic value of signs, symptoms, and syndromes of symptoms, which is an absolute impossibility.

Physicians have been, and are being taught, to depend entirely too much on the age, sex, occupation, past and family histories, the presence of some epidemic, or a certain locality to encourage them to suspect a disease. My experience is that, when a patient is suffering from a certain disease, he has this certain disease, regardless of his age, sex, occupation, or the locality in which I examine him, or from any information that might be gained through the family and past history. Better diagnoses will be made only when we depend, solely, on the diagnostic value of signs and symptoms to make us suspect certain diseases, and use the age, sex, occupation, etc., only in our differential work.

Diagnosis of diseases is not one hundred percent perfect, and I doubt if I should be in error should I say, "Diagnosis, as it is made throughout the general field, is not more than fifty percent perfect." What would and should become of our courts-at-law, if fifty percent of the decisions rendered by our judges and jurors were erroneous? What would and should become of the science of mathematics, if only fifty percent of the problems solved were correct? What would be the percentage of correct solutions in mathematics, if all mathematical problems were solved mentally, as is done in the diagnosis of diseases? We have many problems in diagnosis that may be solved mentally, but some are entirely too complicated for mental solution.

Most of our textbook, journal, and medical society papers, wherein a complete history of a disease, from its beginning to its ending is shown, are fairly easy to solve, but these histories are very different from the histories

obtained at the bedside of a patient, where we see the early stage or the beginning of the disease attack, when we must or should recognize the disease present, in order to render proper treatment. Here is where we must know and be able to make use of the full diagnostic value of every abnormal action and pathologic change and every combination or grouping of these signs and symptoms. Here is where we must make a decision, render an opinion, and accept the responsibility of the health and life of our patient. Here is where mistakes are made that may never be corrected and may cause untold sufferings, numerous operations, or perhaps death. Many *avoidable errors*, will continue to be unavoidable as long as we depend on analytical thinking or mental analysis of the diagnostic value of signs and symptoms in the recognition of diseases.

With the exception of a few pathognomonic signs, can any physician, anywhere, call to memory more than forty percent of the diseases that may produce any one of the more than seven hundred signs and symptoms that may be produced by diseases? Can you or I call to memory 36 diseases that may produce amenorrhea; 45 diseases that may produce a slow pulse; 52 diseases that may produce a rapid pulse; 52 diseases that may produce drowsiness; 46 diseases that may produce abnormal temperature; 45 diseases that may produce leukopenia? Can we mentally analyze the diagnostic value of these symptoms, should we find them presented in one of our patients? How many different diagnoses would be made, if this problem were given to 1,000 different physicians? Every physician would arrive at the same diagnosis, whether it was right or wrong, if they all used the full diagnostic value of every one of the symptoms listed—and their diagnosis would be just as correct as the recorded diagnostic value of the signs and symptoms.

So long as physicians utilize not more than forty percent of the diagnostic value of signs and symptoms, just so long will our percentage of correct diagnoses remain near the forty-percent level, and physicians will continue to disagree in the solving of diagnostic problems, while various -pathies, -isms, and strange theories will continue to flourish.

Each physician who attempts to make a diagnosis, should have his attention called to every disease that may produce every sign and symptom that he considers and, in arriving at a final diagnosis, every sign and symptom that he records in the history must have a satisfactory analysis or explanation.

There are four great stumbling blocks or pitfalls in the pathway leading toward a correct diagnosis: The first is our inability or carelessness in the recognition of the things gone wrong in our patient; second, we attempt

to recognize the presence of some disease without sufficient diagnostic evidence; third, we do not know the full diagnostic value of the signs and symptoms encountered; and fourth, having fallen into the above pitfalls in the early stage of some disease, we then attempt to recognize it after it has damaged many parts or organs in the body, thereby causing a conglomerate mass of evidence, the solution of which is possible only at autopsy.

In the study and examination of diagnostic records, I find that no disease will produce the same sign, symptom, or group of symptoms in every case, whether in the same or different patients; I find that we cannot always recognize the presence of some disease through some tabulated or stipulated syndrome of symptoms, as they are recorded in our textbooks and other books on diagnosis; I find that the human body can not be sectioned into small parts for the purpose of diagnostic study or specialties; I find that we must diagnose diseases in the same manner as we solve our mathematical problems, in that we must make use of a piece of paper and a pencil, together with the recorded facts, instead of using our individual thinking, imagination, and guessing; I also find that the diagnosis of diseases, from a mental solution of its evidence, is entirely too complicated for the unaided mind of any man.

Much has been done during the past fifty years to aid us in the finding or the recognition of signs and symptoms, through chemical tests and mechanical instruments, but what has been done to aid us in the *analysis* of this evidence after we formulate it into a history?

To stimulate the reader's thoughts to a closer study of this subject, I will ask the following questions:

Do all physicians really know and understand exactly how they recognize the presence of a disease in the living human body?

Is it possible to recognize the presence of a disease in any way or manner, except through the analysis of the diagnostic value of its signs and symptoms?

Is the percentage of correct diagnosis made by any physician greater than his knowledge of the diagnostic value of the signs and symptoms that he considers?

Is the diagnostic value of a sign or symptom worth any more in the diagnosis of one of the diseases that produce it than it is in the diagnosis of any one of the other diseases that produce it?

Will we ever be able to recognize the presence of the uncommon, unusual, or rare diseases, so long as our medical schools teach and our textbooks show only the most common diseases associated with signs and symptoms, and the most common symptoms of diseases?

Why is diagnosis so difficult? Because

many patients may have the same disease and no two show the same syndrome or group of symptoms; because we have a different problem in every case, even though their solutions are the same; because every patient to whom we are called is unlike any other patient that we ever saw before, regardless of the disease from which he is suffering; because we must consider more than 600 diseases when we begin with the examination of any patient.

We are going to have many mechanical devices, and are going to welcome them, in the solution of difficult diagnostic problems.

Some day, our textbooks and our medical society papers will begin to show us just where, just when, just how, and through what

particular group of signs and symptoms a certain disease was recognized, and just why the name of this disease was selected in preference to that of any other disease producing a similar history, through differential diagnosis.

Some day we are going to have a system of diagnosis, and through its use we will be able to make early recognition of the presence of diseases, and then be able to recognize the different complications as they appear, from day to day or month to month, through an accurately-kept record of the signs and symptoms as they actually appear from day today. Then, and only then, will we be able to recognize the progress of any disease through its recorded history.

414 W. 3d Street.

## Practical Obstetric Suggestions

By Frank L. Wood, M.D., Lynden, Wash.

SOME thirty years ago, after a four-year medical course, a four-month hospital experience, and one year of association with a busy family doctor in South Dakota, I located in the backwoods country of southwestern Washington. Always greatly interested in obstetrics and well trained in aseptic technic, I early came to the conclusion that, because of the impossibility of rendering sterile the vulvar and anal regions, a simple aseptic technic in obstetrics was impractical and dangerous, so I began, almost at once, to combine with it the free use of strong antiseptics at every stage of all obstetric procedures.

Thirty years ago the women in rural communities were not well informed in birth control measures, and I was called to attend about one-third as many cases of incomplete and inevitable self-induced abortion as of childbirth. The means employed by these women to induce abortion varied from the rarely-successful oxytocics, through the gamut of catheters, knitting needles, button hooks, and even umbrella rods! Some of my patients were in dire straits, as a result of hemorrhage or sepsis, when I was first called. My local treatment was always the same for like conditions. I carried with me an Edlen's bag, which is a special obstetric bag with alcohol-lamp sterilizer. After sterilizing my instruments, the sterilizer was partly filled with strong antiseptic solution, and after preparing my hands I was ready to proceed.

During my first years of practice, rubber gloves had not come into general use, so I merely scrubbed my hands and repeatedly washed them in a strong ( $\frac{1}{2}$  to 1-percent, or even stronger) solution of liquor cresolis compositus as I proceeded. After gloves

came into general use I prepared my hands as usual and then donned gloves that had been washed, inside and out, with pure compound cresol and rinsed. Then, each time I touched the field of operations, I first washed my gloved hands in the same way and rinsed them, so that they were always dripping with strong cresol solution when internal examinations or manipulations were undertaken. This, I believe, is the secret of safety in the prevention of infection in obstetrics, either in the home or in the hospital, for the vaginal tracts of married women, at least, practically always harbor pathogenic bacteria, and this method of approach not only prevents carrying bacteria to the patient, but also tends to remove, destroy, or render innocuous those already present. Results have borne me out in this belief. The patients were prepared by clipping the hair and scrubbing the vulva with soap and water and strong compound cresol solution (about 1 fluid dram—4 cc.—to a quart of water).

### Management of Abortions

For simple hemorrhage, if not severe, and when abortion did not seem inevitable, I prescribed rest and sedatives; and occasionally, through this treatment, together with sound advice, pregnancy was carried to term. In the inevitable cases, when sepsis did not threaten and hemorrhage was severe, and there was insufficient dilatation to permit the use of placenta forceps, the uterus was packed with sterile gauze by means of a tubular packer, carefully avoiding trauma to the cervix and fundus. Often the entire remains of the ovum came away in a few hours following this procedure. If there was sufficient dilatation, I quickly removed the

remains of the ovum by means of wide or narrow placenta forceps. No curetting was done, but all detritus was removed as carefully as possible by the searching jaws of these forceps. Following this, the uterus was irrigated by means of a sterile irrigator attached to an ordinary fountain syringe. The syringe was not boiled but was merely washed each time it was used by pouring boiling water through it. Since sterile water was not obtainable in the home, and often there was no time to prepare it by boiling and cooling it, I sterilized ordinary clear water by adding enough tincture of iodine to it to give it a distinct color.

In spite of the fact that I often found the ovum in various stages of decomposition and disintegration, so that the odor was foul; in spite of the dirty instruments used to bring about abortion, the evidences of sepsis, and the usual insanitary surroundings, not one of these patients, in all these years, has died of either hemorrhage or infection.

This experience in the management of many inevitable and badly infected abortion cases, early in my practice convinced me that, if one avoided trauma to the uterus, one could perform any necessary service, intra-uterine or otherwise, for these or regular cases of childbirth, even in the most insanitary surroundings, without the least danger of infection, if one followed the rules of asepsis as far as possible, and then resorted to thorough antisepsis at every step of obstetric procedures. Not only has this technic proved to be positive in its safety in the management of inevitable abortion, but I have found that, by applying it to the management of childbirth, I have been able to perform hundreds of intrauterine operations, including the application of forceps, version, manual dissection and removal of adherent placentas, and manual and bimanual dilatation of the cervix in the first stage of labor, without any evidence of infection in any of these cases. I have had a few cases of mild sepsis, but, strange as it may appear to some, not in any of those cases in which internal manipulations were resorted to. My only case of phlegmasia alba dolens following childbirth occurred in a woman in whom no internal examination had been made, who was not lacerated, and whose home was sanitary. Naturally enough, this experience has led me to believe that these manipulations, with gloved hands dripping with strong compound cresol solution, have served as a prophylaxis against sepsis, rather than as a cause of infection.

#### First Stage of Labor

According to the present vogue in hospital delivery, the management of the first stage of labor is one of "hands off," without

any regard for the length of time required, the agonizing pain that must so often be endured for many hours, or the shock and lowered resistance to infection which may result from this neglect. Too often, we are advised never to begin anesthesia during the first stage, because we "will have to keep it up." Too often, we are advised never to assist in the dilatation of the cervix, or even to make a vaginal examination, but to resort to what appears to me to be a much more mussy, disagreeable, and dangerous method of examination—by rectum.

Of course, if the possibility of resorting to cesarean section is contemplated, it is considered best not to disturb the vaginal tract at all, but unless the patient's pelvis is obviously deformed, it is extremely rare that there is any justification at all for this formidable operation. In this opinion I am supported by able authorities. The safety of the mother must be the first consideration, and it is perfectly safe to say that this is never enhanced by resorting to emergency cesarean operation, which is dangerous enough at best, when planned in advance for rare justifiable reasons; and when resorted to after the onset of labor, its dangers are multiplied many times.

Because the first stage of labor is so often prolonged to many hours or even days, and during a considerable part of that time the patients may suffer much more severely than at any other time during childbirth, it has been my practice to render aid in three ways when suffering becomes too severe or delays become too protracted. In the first place, when it becomes apparent that the patient's sufferings are becoming very severe and almost unendurable, I administer small amounts of chloroform at the beginning of each pain. This lessens their severity most markedly if just enough is given to produce a slight sense of dizziness. It is claimed by some that this is dangerous and that it delays progress. As to the danger, I can only say that I have never seen any evidences of harm, either to mother or child, in the many hundreds of cases in which I have administered chloroform in this way. Neither have I ever seen a report of a case in which harm was done by this means of partial anesthesia. It may, however, delay progress, to some extent, by causing partial uterine inertia. When it becomes apparent that this has taken place, it can be safely overcome by the administration of one or two *minims* of pituitary extract, repeating this dose in fifteen minutes, if it has not restored the force and frequency of the uterine contractions to normal.

Here again, I may be criticised by some who, because pituitary extract has been one of the most abused of all of our most effec-



tive therapeutic measures, condemn its use, under any and all circumstances, during the first two stages of labor. Again I must say that, after administering hundreds of doses of this preparation in the first and second stages of labor, and in the manner described, I have yet to see it produce uterine contractions of greater force and frequency than those that occur in many normal cases. But it must be administered *only to restore the contractions to normal*—never to cause contractions of excessive force or duration. Because many authorities have recommended excessively large doses, I, at first, experienced the effects of over-dosage until I worked out the proper dose during the first year after I began its use. But because I did my experimenting on multiparas with roomy pelves, and in the second stage of labor, no harm was done.

#### Dilating the Cervix

The third way in which I render assistance, and thereby shorten labor many hours, is by aid in the dilatation of the cervix. I do not use bags or other dilators, because they are difficult to manage, tend to increase the danger of sepsis and, perhaps most important of all, may result in severe injury to the cervix and, in this way, still further increase the risk of infection.

When dilatation is slow and painful, I use the gloved fingers of one hand for this purpose, and only after the cervix has become flattened and dilated to one inch or more. It is surprising how much can be accomplished in a few minutes by the weak efforts in separating two, three, or four fingers within the cervix.

Here, again, I know that I am subjecting myself to criticism by advocating such a procedure. It will be said that I am apt to traumatize the cervix, and that I am also subjecting my patient to great danger from infection. Neither of these possible charges can

be substantiated. In the first place, if one will grasp two, three, or four extended fingers of one hand with those of the other, and then try to separate the extended fingers as is done in dilatation of the cervix, it will be seen that only a very weak force can be exerted, not sufficient to do any harm to the cervix. Nevertheless, this weak force, when constantly applied at right angles to the cervical ring, very often accomplishes wonders in as short a time as fifteen minutes, and may result in shortening this most painful stage of labor many hours. Even bimanual dilatation of the cervix, which is very rarely necessary in cases of very rigid os and greatly prolonged first stage, may be accomplished in a reasonable length of time and without damage to the cervix, if one is patient and not too hasty. As a matter of fact, it is the opinion, not only of myself, but also of other experienced men who resort to manual dilatation when it seems advisable, that this procedure actually aids in the prevention of lacerations of the cervix. In addition to this, the partial dilatation of the vulva by the hand aids in the prevention of perineal lacerations.

All of this aid in relieving the pain of childbirth and in preventing delays due to rigid os and partial uterine inertia is made possible by an antiseptic technic which renders free from danger the employment of the measures here described. Not only this, but the urge to apply forceps hastily, prematurely, and unnecessarily, because the patient, in her anguish demands that we "do something," is obviated.

Too many, I fear, in their haste to condemn these humane measures, will forget the much more real dangers to which so many are subjecting their maternity patients through neglect, the hasty and unnecessary use of forceps, or the even more culpable and much too frequent and dangerous resort to cesarean section.

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#### PLEASURE AND PAIN

*The pleasure or pain resulting from the things or experiences of our daily lives, except in extreme cases, depends very largely upon ourselves—on the way we regard the fact or respond to the experience.*—ERNEST WOOD, in "The Intuition of the Will."

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#### SELF-SACRIFICE

*No discovery of modern psychology is, in my opinion, so important as its scientific proof of the necessity of self-sacrifice to attain self-realization.*—HENRY C. LINK, Ph.D.

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# The Control of Streptococcic and Pneumococcic Infections with Edwenil

By Leo Saxon, M.D., Chicago, Ill.

**I**NFECTIONS and their sequelae are responsible for most of the dangerous conditions a physician is called upon to treat. It is also conceivable that many degenerative diseases, such as arteriosclerosis, myocardial degeneration, chronic nephritis, etc., met with in later life, are the results of chronic infections with the accumulated pathologic effect on the lining of the capillaries, potentially affecting every organ in the body.

Going a step further, it is time that we look upon the different diseases, not as separate entities with a definite pathologic "halo," with a definite set of symptoms, history, etiology, and "specific" therapy, but rather as the manifestations of the same chemico-physical changes, in which sense there would be, according to McDonagh,<sup>1</sup> only one disease, showing various disturbed bio-chemical conditions, based more on the individuality of the host than on the virulence of the invader, although the latter factor should not be neglected. If the underlying pathology of all diseases, especially the infectious types, is uniform, regardless of whether the conditions is syphilis, diabetes, multiple sclerosis or septicemia, being essentially a disturbance of the colloidal balance of the cells' protein molecules, consisting of hydration or dehydration, or both alternately, a new approach to the control of serious, life-taking, heretofore uncontrollable infections is at least theoretically (and often practically) possible.

All micro-organisms attacking the body act as condensers; that is, as bodies robbing the cells of their electric energy. To restore the electric balance in the blood plasma, which is the seat of the protective power of the body, a good conductor should be introduced. In Edwenil we have a colloidal suspension of animal blood serum, mixed with beef extract, with the addition of calcium. It counteracts the hydrator effect of the invading organisms and disperses the protein particles of the plasma, restoring the electric balance and the immunity of the body. As Edwenil is deproteinized, we do not get the adverse effects of the foreign proteins. No general or local reaction is encountered, and no rise in temperature or anything equivalent to a shock is produced.

Looking at it from another viewpoint, infection excites the production of special types of

antibodies, which in turn cause actual bacteriolysis. Many investigators assume that the principal source of these antibodies is the reticulo-endothelial system—a system of cells found in the spleen, in the liver, and in the lymphatic tissues. In animal experiments, it has been proved that Edwenil increases the lysogenic power of the blood. For the control of septic infections, it is important to administer an agent that will not upset the system and, instead of increasing the temperature and producing shock, will reduce the temperature and produce no local or general reaction. If this agent produces results superior or even equal to foreign proteins or specific vaccines, we would naturally favor it and substitute it for the other more dangerous methods of treatment.

I will discuss the histories and results of treatment in some cases of *septic infection* and of *pneumonias*, encountered in private and hospital practice.

## Septic Infections

1.—A case of *septic incomplete abortion*, in a woman of twenty-four years. This patient entered the hospital complaining of severe backache, lasting one week; insomnia; and moderate fever—101° to 102° F. She missed her period by two weeks and gave a history of slight bleeding. She was pale, emaciated, and her temperature was 102.6° F. on admission; pulse 100, with low tension.

On the second day her temperature went up to 104°; pulse rate 130, very feeble and irregular. On the third day she had a severe chill lasting for an hour. Digital examination showed a mass on both sides of the uterus and resistance in the posterior culdesac. *Diagnosis*: parametritis; "frozen pelvis." For two days the chills continued on an average of three to four daily. The patient was very toxic; pulse and respiration were much increased; and a grave prognosis was made.

On the fourth day, Edwenil was administered every six hours, in 4 cc. doses; on the fifth and sixth days in 3 cc. doses; and thereafter once daily for two weeks. The chills ceased after the second dose of Edwenil. The temperature dropped to normal after three days, but rose to 102° F. on the seventh and eighth days, and finally fell by lysis, so that after the fifteenth day the temperature remained normal.

An examination at that time showed that the masses surrounding the uterus were con-

1.—McDonagh, J. E. R.: "The Nature of Disease." Part I. London, Wm. Heinemann, 1924.

siderably decreased in size, and there was much less tenderness. The backache had disappeared. The patient's general condition rapidly improved. Her pulse rate was between 80 and 90 and she began to eat ravenously. A further reduction in the size of the inflammatory masses and final complete absorption of the exudate was accomplished by using boiled milk, in 5 to 10-cc. doses, every third day.

The salient features of this case are: We know that many women in this country and elsewhere lose their lives each year as a result of septic abortions. Usually we are confronted with severe streptococcal infections, and it is in this type of infection that Edwenil, a powerful conducting agent, relieves the toxemia, reduces the temperature, respiration rate, and pulse rate, and acts as a life-saver.

2.—Another case of *septic abortion*, in a woman of thirty years, who had been bleeding for four weeks and who showed beginning septic infection with chills and high fever following curettement, responded even more rapidly. After two days of treatment with 4 cc. doses of Edwenil, her temperature fell critically to normal. These two cases are cited among ten, which were seen in consultation and in two different hospitals.

3.—The effect of *erysipelas anti-streptococcal serum* is often astonishing, but there are cases where this serum is disappointing.

Recently, I saw a woman 60 years old, who developed a marked butterfly-type of erysipelas on both cheeks and the forehead. Her temperature ranged between 103° and 104° F.; she was very toxic; and there were pronounced chills, indicating a septic infection in the blood stream.

Erysipelas anti-streptococcal serum was administered twice, with apparently good results; but after five days the condition, which had affected only the cheeks and forehead in the beginning, recurred in the same location and then spread over the whole scalp. The patient being financially unable to pay for any more specific serum, she was put on two daily injections of Edwenil, in 3 cc. doses. After four injections, the temperature fell abruptly and the rash began to fade rapidly. No further treatment was necessary.

Reports from other physicians using Edwenil in cases of erysipelas are very encouraging, and there is no doubt in my mind that ultimately, and owing to the lower cost of this remedy compared to the specific serum, Edwenil will replace it. Another factor of importance is that the serum produces a profound reaction, increasing the temperature and upsetting the already toxic patient, in contrast to the mild effect of Edwenil, which gently restores the patient to health without any general reaction.

The effect of this bacteriolytic agent is also

dependent upon *the type of invading organism*. The greatest effects obtained are in streptococcal and pneumococcal infections. The results in colon bacillus infection are less spectacular. In staphylococcal infections there are other agents, such as foreign proteins, staphylococcal toxoids, and manganese butyrate, which may be preferred to Edwenil. We must be careful, also, about administering this preparation where there is no chance of drainage. It is, therefore, contraindicated in cases of mastoiditis, acute appendicitis, and all conditions where drainage is mechanically impossible. In those cases the administering of Edwenil may aggravate instead of relieve the morbid condition.

#### Pneumonias

The most dramatic results have been achieved with Edwenil in cases of broncho- and lobar pneumonia. The use of Felton's serum has been acclaimed by many physicians. It is said that it reduces the mortality of Type I from 30 to 10 to 20 percent, and that of Type II from 40 to about 20 percent. Type III cases remain refractory. Felton's serum must, however, be given early and in full doses. A minimum of 100,000 units, intravenously, is required, but owing to the prohibitive cost of this serum the average patient can not be treated with this therapeutic agent. We are, therefore, forced to turn to other means of combating the appalling mortality in pneumonia.

Recently, I was called to see a patient who was suffering with unresolved pneumonia of three weeks' duration. The patient was a man of 35, heavily built, not an alcoholic. He was in an extremely toxic condition—in fact, he was in coma when I saw him; could not be roused; was unable to speak; was nearly in extremis. His temperature was 104.6° F., and his pulse could hardly be palpated.

The administration of Edwenil was begun in large doses—6 cc. every four hours; then 4 cc. repeated three times. After twenty-four hours of treatment, the temperature dropped to 101°; the patient could be roused and seemed to have recovered from coma. The treatment was continued for four days, in small doses, day and night, and after one week the patient made a brilliant recovery. The diagnosis was verified by x-rays.

The patient produced hardly any sputum at the beginning of the treatment. After two doses of Edwenil he began expectorating a constant stream of brownish-colored, at first viscid and then liquid sputum. It seemed as if the remedy had established drainage.

I have treated about 20 cases of pneumonia in the past year with this remedy, and have had only one fatality. I am under the impression that the mortality of pneumonia can be definitely lowered if Edwenil is used early and in adequate doses. This is entirely safe,

because there are no general reactions, which is not remarkable because the preparation contains only 0.02 percent of protein. There is also no tendency to anaphylaxis, and it also can be used following an injection of immune serum without provoking an untoward effect.

#### Other Conditions

I have also used Edwenil as a *prophylactic measure postoperatively*. In this connection one patient, a woman in very poor general health, was operated upon for a pelvic condition. Having been under the anesthetic for two hours, she developed a severe cough on the first day after operation. This woman had suffered from bronchitis previously, and the danger of pneumonia was imminent. Three prophylactic doses of Edwenil stopped the cough, and she made an uneventful recovery. I have used this method in 15 surgical cases without encountering one case of pneumonia. Of course this number is very small, but such results should encourage others to try this prophylactic measure. A full description of the effect of this bacteriolytic agent in the treatment of pneumonia will be found in an earlier publication.<sup>2</sup>

I have treated 5 cases of severe *pertussis* in children ranging in age from 9 months to

6 years. Three (3) of these cases were first treated with so-called "specific" pertussis vaccine, which was administered in four ascending doses up to 1 cc. As no results were achieved in these cases, Edwenil was used daily and an average of five injections were given. All 5 cases improved rapidly and the duration of the disease was reduced to two; two; two and one-half; three; and three and one-half weeks. This is considerably less than the average whooping cough case lasts. Two pneumonia cases developed after whooping cough in four- and three-year-old children, respectively, and responded to the usual procedure outlined above.

In conclusion, I wish to emphasize that we have in Edwenil a remedy which has remarkable effects in different types of septic infections caused by the streptococci and pneumococci, if used early and in adequate doses, and in cases where drainage is not mechanically impossible. The nearly complete absence of local and general reaction following this therapy is a decided advantage, in comparison with both specific vaccines and foreign proteins. No anaphylactic reaction follows its use even where horse serum has been used previously and has sensitized the patient. I would urge all physicians to give this remedy a trial in septic and pneumonia cases, and I think all who do so will be rewarded with striking results.

300 West North Ave.

2.—Saxon, Leo: The Treatment of Pneumonia with a New Bacteriolytic Agent (with 10 Case Reports), CLIN. MED. & SURG., Vol. 43, No. 7, July, 1936, pp. 329-332.

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#### FAITH AND FEELING

*There are many unhappy people who envy the white-haired priest and the simple saints who find serene contentment in their faith.*

*One of these unhappy people will say: "I would give anything on earth for such peace of mind, but there is nothing in religion for me. I have studied it and I have tried to pray, but it doesn't do any good. I can't feel anything."*

*He is inviting discontent by expecting too much of himself.*

*There was another man, named Thomas, who could not believe unless he could feel the pierced hands and the wounded side. If all were like him, none could believe anything that is beyond reach of the physical senses.*

*The perception of spiritual truths requires spiritual feeling. And feeling does not depend upon the cause, but rather upon the individual's capacity for feeling.*

*But those who feel little must base their faith on intellectual conviction, and faith with that foundation affords a more lasting peace than any belief that rests on emotion.*

*You can't feel the power that holds the earth secure in space, but reason tells you the power exists, infinite and eternal, and intellectual conviction gives you the faith that prevents all anxiety.*—ROBERT QUILLEN, in *Fountain Inn Tribune*.

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#### REASON AND THE MIND

*Reason is not an end in itself but a tool for the individual to use in adjusting himself to the values and purposes of living which are beyond reason. Just as the teeth are intended to chew WITH, not to chew themselves, so the mind is intended to think WITH, not to worry about. It is an instrument to live with, not to live for.*—From "The Return to Religion," by HENRY C. LINK, Ph.D.

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# PHYSICAL AND OFFICE THERAPY AND RADIOLOGY

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## Artificial Fever Therapy

By Harley E. Kimble, M.D., Chicago

**C**ONTROLLED elevation of the body temperature with physical agents is considered an effective measure in the treatment of many diseases. The physical agents used today for the production of artificial fever can be grouped according to their respective operating temperatures.

In the first group the environmental temperature of the medium about the patient is maintained at a level higher than the internal temperature of his body. This class includes hot water baths, mud packs, dry and moist air, infra-red and electric-light cabinets, the Kettering Hypertherm, the Clark Hyperpyrexator, and the electric blanket. In some of these the operating temperatures often reach 160° F., or higher.

In the second group the environmental temperature of the atmosphere about the patient is maintained at a level lower than the internal temperature of his body. In this class are those methods which utilize either diathermy or electro-magnetic induction for converting energy into heat inside the body. The advantage of electro-magnetic induction over diathermy is that no contact with the patient is necessary. Today one of the efficient methods of electromagnetic induction is the combination of the Inductotherm and a fever cabinet.

In order to discuss these two groups of apparatus impartially, it is necessary to re-

view briefly: (1) normal temperature control; (2) fever control; and (3) heat stroke.

### Normal Temperature Control

Normally, the body, through numerous physiologically controlled processes, maintains its temperature near a constant level. This level, in a healthy individual, is between 99° and 100° F. (rectal). The physiologic processes controlling temperature function so efficiently that this level is sustained even when the body is subjected to a wide range of internal and external conditions.

The production of heat within the body is dependent upon the physiologic oxidation reactions within its tissues. Obviously, body temperature remains stationary when internal heat production equals heat elimination. When the released heat within the body increases, the cutaneous capillaries dilate, the skin becomes warmer, and more heat is lost by radiation and conduction. The patient also perspires freely, thereby losing additional heat through evaporation of moisture.

Likewise, the body protects itself from excessive heat loss, which diminishes when the skin capillaries contract. However, if this factor is insufficient in preventing the lowering of body temperature, heat production increases. From this, one sees that heat regulation is an important skin function. Physiologically it always functions in the same

way—heat dispersion or heat conservation; never heat absorption. In other words, no mechanism was provided by nature for increasing the internal body temperature by the absorption of heat through the skin. As long as the body is able to do so, it resists any and all attempts to have its temperature elevated through the absorption of heat from without.

#### Fever Control

Fever is characterized by patho-physiologic elevation of the temperature of the body. Naturally, fever may be caused either by excessive heat production without an increase in heat loss, or by a diminution in heat loss without an increase in heat production. The internal increase in the production of heat occurs in nearly all fevers, and is greatest during the "chill." It is also increased when the fever is rising and when it is at its height.

During fever the average increase in heat production is about 25 percent. A portion of this increase is due to the initial elevation of body temperature. This is explained by the fact that all oxidation reactions are accelerated by increasing the temperature. In the body, for every rise of one degree (Centigrade), heat production increases about 6 percent. From this, one concludes that part of the increase in heat production is an effect, rather than a cause. When the body temperature is rising, the loss of heat from the body diminishes. Losses through radiation and conduction from the skin are limited and losses by evaporation may be increased, but the former offset the latter. From these facts one realizes that heat regulation is controlled by many complicated mechanisms, which react to numerous factors. These factors act independently upon heat loss and heat production.

#### Heat-Stroke Control

Under certain circumstances, even the normal mechanisms are insufficient to keep the body at a constant temperature. If the internal temperature of the body becomes considerably elevated from any outside cause, we speak of it as heat stroke. In heat stroke the patient becomes dizzy and delirious; his pulse becomes rapid; and in some cases he dies. Before this happens, severe injury must be inflicted upon the heat-regulatory mechanism. Heat stroke patients are pale and cyanotic, which indicates an unbalance or collapse of the control over the peripheral circulation. Consequently, this results in imperfect regulation of the heat lost from the surface of the body.

The main etiologic factors in the production of heat stroke are: (1) high external or environmental temperature; (2) exertion; and



Fig. 1:—Inductotherm and Fever Cabinet in Operation.

(3) high humidity. Any method that employs any of these three factors for the production of artificial fever as a therapeutic measure is more or less dangerous. Fever therapy cannot take its proper place in our armamentarium if it is not extensively adaptable to the old, the young, the feeble, and the ailing. Any method which produces signs and symptoms of impending heat stroke, in a normal, healthy individual, cannot be safely used on a sick or feeble person.

One can now say that methods used in these two distinctly different groups of apparatus may and do produce different physiologic and pathologic reactions, which differ because they are the results of the relative temperatures of the environmental media surrounding the body. In the former (where environmental temperatures are higher than those within the body), all the symptoms of impending heat stroke are or may be present. In the latter (where environmental temperatures are lower than those within the body)<sup>1</sup>, there is a surprising scarcity of these symptoms.

When one takes into consideration the fact that the human body is a non-mechanical object, and therefore never responds mechanically, one will hesitate to use any method for the production of artificial fever which is not physiologically sound. Therefore, I shall omit further discussion of the true mechanical methods of artificial fever production, with a word of warning.

#### Electro-magnetic Heating

How nearly does the electro-magnetic cabinet method simulate nature's own method of producing heat? Does it violate any physiologic laws? Is it applicable to the sick and feeble patient? The answers to these questions are obvious as one becomes acquainted with the method, which was de-



scribed in detail in an earlier paper.<sup>2</sup> It has recently been perfected and modified, so that its efficiency and adaptability are now better than before.

Briefly, the patient is placed in a specially designed cabinet (Fig. 1). The temperature of the air in this cabinet is maintained, automatically, at from 99° to 100° F., with a humidity approaching 70 percent.

From a special, adjustable coil, suspended above the patient's chest and abdomen, a high-frequency, electro-magnetic wave is projected through the body tissues. Due to their biophysical properties, these waves are converted into heat in the more conductive tissues of the body<sup>3</sup>—the blood, vascular organs, and the muscles. Within from one to two hours the internal temperature of the patient is elevated from 3 to 5 degrees F. The current is then shut off. From this point on, the artificial fever is similar to a natural fever. In other words, we have replaced only the "chill" of a natural fever with the induction and release of artificial heat within the body by a biophysical agency.

Figure 2 shows the fever curve, pulse, and cabinet temperature in the treatment of the average patient. It simulates a natural fever in the following ways:

- 1.—The internal temperature of the patient is always higher than the environmental temperature.
- 2.—Heat can, at all times, leave the skin by radiation and conduction. (The skin is never forced to absorb heat.)
- 3.—Some heat is lost by evaporation of perspiration (relative humidity 70 percent). This keeps the sensitive nerve endings in the skin from being antagonized.
- 4.—The body produces its own energy for the continuation and further elevation of the fever, by acceleration of metabolism.

These factors, together with other features incorporated within the cabinet, such as a soft mattress, intermittent circulation of air, and the like, keep the patient comfortable. A comfortable patient is not irritable nor restless. This permits the use of small doses of sedative, if any are needed.

**There are practically no contraindications**

for the electro-magnetic-cabinet type of thermal therapy, provided every patient is examined thoroughly to exclude intercurrent disease for which fever is contraindicated.

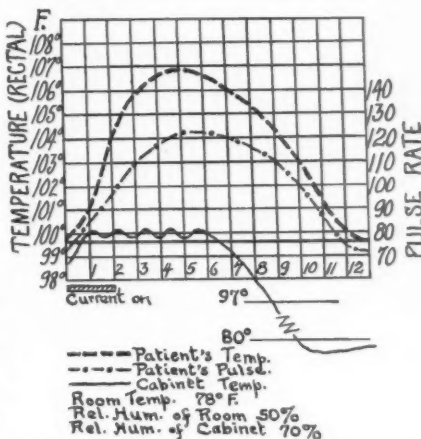


Fig. 2:—Chart of Patient during Treatment with the Inductotherm and Fever Cabinet.

## Summary

- 1.—Physical agents used for the production of artificial fever can be grouped according to their respective operating temperatures.
- 2.—Those operating at temperatures higher than that of the body are, not only mechanical, but also unphysiologic.
- 3.—Those operating at lower temperatures, and producing heat within the body, are similar to nature's own method.
- 4.—A method is discussed which operates at a temperature lower than that within the body, and therefore, does not violate any physiologic laws regulating body temperature.

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- 1.—Benson, S.: Relative Influence of External and Internal Body Temperatures upon the Heart. *Arch. Phys. Therap.* X-Ray, Rad., 15:303 (March), 1934.
  - 2.—Kimble, H. E., et al: Electroprexia with the Inductotherm. *Physiotherapy Rev.*, 15 (Jan.-Feb.), 1935.
  - 3.—Merriman, J. R., et al: A New Method of Producing Heat in Tissues: the Inductotherm. *A. J. Med. Sc.*, 187:677 (May), 1934.
- 7854 So. Ashland Ave.

## INTROVERT AND EXTROVERT

The terms extrovert and introvert essentially mean degrees of selfishness. The introvert or selfish person avoids the trouble of meeting people; the extrovert goes out of his way to meet them. The introvert evades the obligations of clubs and committees; the extrovert accepts them. The introvert has no time for the things he dislikes to do; the latter does them anyway. The former, afraid of making mistakes and of embarrassing himself, risks no action. The extrovert may be afraid, too, but still acts, and by his mistakes and suffering, ultimately achieves skill and confidence.—From "The Return to Religion," by HENRY C. LINK, Ph.D.

## NOTES AND ABSTRACTS

### The Advantages of Evipal Anesthesia\*

**E**VIPAL Soluble induces anesthesia rapidly, with total absence of apprehension or struggling, and the complete and rapid recovery, without nausea or other unpleasant after effects, makes this an outstanding anesthetic. Laboratory studies and a clinical experience in over 50,000 recorded cases attest to the safety of the drug and warrant its wider use.

At present it would appear that this barbiturate is one of the most convenient agents we have for short surgical procedures and that its use can be extended with further clinical experience. It is ideal for incision and drainage of boils, carbuncles and abscesses; suture of lacerations, especially those about the face and in children; reduction of fractures and dislocations; minor pelvic operations, such as dilatation and curettage and cauterization of the cervix; minor rectal operations; difficult and painful dressings; cystoscopy and proctoscopy.

With increased use of Evipal Soluble, we are injecting the drug more rapidly and use smaller total doses than in the early cases. It is important to remember that, under no condition, should more than 6 cc. of the solution be injected at once; and it is wise to wait 20 or 30 seconds after the patient has lost consciousness before giving a supplemental injection.

FRANCIS M. FINDLAY, M.D.  
Santa Barbara, Calif.

### Injection Treatment of Hernia†

**I**N every case of reducible hernia in which an operation might not be safe, we have an alternative method (the injection treatment) which is as effective; is free from danger; does not require hospitalization nor loss of time from work; and does not involve an employer in a claim for injury while on duty. There is no method or procedure, in medicine or surgery, that is fool-proof in untrained or unskillful hands.

Granted a thorough knowledge of the anatomy of the hernia areas, the first essential requirement for success in the injection treatment of reducible hernia is a comfortable, well-fitting truss, which will keep the hernia in place under all conditions while the treatment is being given. The physician should know at least the general principles

of truss fitting and should check this matter himself. No one make or style of truss is appropriate for all cases. There must be individualization.

Always be absolutely certain that a hernia is *completely* reducible. A piece of incompletely reduced omentum may cause a great deal of trouble.

Follow up these patients at frequent intervals, and give more injections if necessary. Fibro-elastic tissue may be more or less absorbed.

There are a number of proliferant solutions on the market which are reported to give good results, but I have been so successful with the Pina-Mestre solution that I have not tried the others.

PAUL T. BUTLER, M.D.

Orlando, Fla.

### Heat Therapy in Syphilis

**I**N seven (7) cases of early syphilis, the clinical and serologic signs and symptoms have been entirely cleared up by heat therapy, combined with injections of arsphenamines and bismuth salts, in an average period of forty-two days. It would seem that the human body can be entirely freed from the organisms by this method.

If the hyperpyrexia is produced by electromagnetic induction, as much as 0.6 Gm. of neoarsphenamine can be given to robust patients, at a temperature of 105.8° F.; while temperatures as high as 107.6° F. (used in treating syphilis of the lymph glands) have been maintained for several hours without producing any demonstrable damage to the functions of the heart, liver or kidneys. When the rise of temperature is produced by external heat, serious symptoms sometimes appear.

For giving this treatment safely and satisfactorily, the medical staff and the attendants must be thoroughly trained in the theory and practice of pyretotherapy, and the patient must be hospitalized for twenty-four hours at each session of the treatment.—DRS. C. A. NEYMANN, T. K. LAWLESS, et al., in J.A.M.A., July 18, 1936.

### X-Ray Diagnosis of Heart Lesions\*

**T**HERE is no doubt that the x-rays can give valuable corroborative evidence in the diagnosis of heart lesions.

In mitral insufficiency, the shadow of the heart is increased in its transverse diameter

\*West. J. Surg., Gynec. and Obst., April, 1936.

†Med. World, Sept., 1936.

\*Ill. St. M. J., June, 1936.

and the right ventricle shows the greater part of the hypertrophy. The left auricle is unchanged.

In mitral stenosis, on the other hand, in addition to the hypertrophy of the right ventricle, we see the left auricle enlarged and, generally, the lungs and liver congested.

In aortic insufficiency the x-rays show a hypertrophied left ventricle and, generally, a dilated aorta.

In uncomplicated aortic stenosis we find nothing but moderate hypertrophy of left ventricle, the aorta being of normal caliber.

In combined mitral stenosis and insufficiency the hypertrophy frequently assumes such proportions as to push the right auricle considerably to the right.

When lesions of the mitral and aortic valves are combined, we find both the left ventricle and the left auricle much enlarged.

In general, the experienced examiner has no great difficulty in differentiating the various valvular lesions, but when such difficulty does arise, the x-rays can often give valuable information.

ROBERT S. BERGHOFF, M.D., F.A.C.P.  
Chicago, Ill.

Look for FACTS AND COMMENTS among the advertising pages at the back.

## BOOKS

### Rhinehart: Roentgenographic Technic

**ROENTGENOGRAPHIC TECHNIQUE.** A Manual for Physicians, Students and Technicians. By Darmon Artelle Rhinehart, A.M., M.D., F.A.C.R., Professor of Roentgenology and Applied Anatomy, School of Medicine, University of Arkansas; etc. Second Edition, Thoroughly Revised. Illustrated with 183 Engravings. Philadelphia: Lea & Febiger. 1936. Price, \$5.50.

The purpose of this book is to give to roentgenologists, x-ray technicians, medical students, and especially to physicians who do some roentgenographic work for themselves, a clear, practical and modern statement of the best and most successful methods for obtaining good x-ray pictures. It does not deal with x-ray therapy at all. An experimental method is presented for measuring

the roentgen-ray output of any equipment. Every technic discussed is presented in full detail and illustrated with helpful pictures, which show up well on the heavy, coated paper used in the book. The index and bibliography are adequate.

This volume should be in the library of everyone who does any roentgenographic work at all, as the technic presented may be used with any type of apparatus.

## NEWS



Courtesy of Westinghouse Lamp Co.

### Rotary Sterilizer for Liquids

THE germicidal properties of the radiant energy given off by the Sterilamp are now being put to a new use, in the sterilization of liquids.

The picture above shows D. Gordon Sharp, biophysicist of the Westinghouse Lamp Co., with the rotary sterilizer which he has invented. The glass jar revolves around the Sterilamp, and can then be sealed until the liquid it contains is to be used.

CLINICAL MEDICINE AND SURGERY has more interesting and valuable matter than any other journal that comes to my desk.—F. W. P., M.D., Ia.

### THE SCIENTIFIC ATTITUDE

*The scientific attitude implies the desire to seek, the patience to doubt, fondness to meditate, slowness to assert, readiness to reconsider, carefulness to dispose and set in order, and hating every kind of imposture.*—FRANCIS BACON (LORD VERULAM).

# A LIVING FOR THE DOCTOR

(The BUSINESS of Medicine)

## The Successful Doctor\*

**SUCCESS** is the attainment of one's objective; reaching the goal. It is "getting there."

To succeed you must know your subject, and this means study. Study of textbooks certainly. But even in your undergraduate days you should learn the supreme value of monographs, original articles, current medical and other scientific journals. Only in this way can you be trained in the ability to judge for yourselves the value of what is written, to distinguish fact from theory, hypothesis or the mere guess—and not a little that is in print is of this latter character. "To know by heart is simply not to know." "Let the boy examine and sift everything he reads and take nothing on trust or authority," said Montaigne more than 300 years ago. Such ideas, though old, will stand repetition.

So read the promising new, as well as the approved classic of the past. Read by cases, by subjects; for example, diseases of the blood or of the bone. If attracted by any one subject, read exhaustively and ponder over it. You will acquire in this way a sense of mastery. You will learn the meaning of thoroughness. A thin spread of knowledge of a great many things spells mediocrity. The mediocre man is the dangerous man in the community. He does not know the limitations of his own knowledge or those of others, the risks of operation or of a drug, the healing power of nature. Book knowledge is indispensable. It means work and more work in the library. And, blessed result of it all, such work becomes your daily joy!

Welcome the opportunity or compulsion to teach. No man is aware of what he knows or believes until he has tried to tell someone else about it or write it down. Join a medical society. When you have something to say, and only then, speak. Take a medical journal, or several of them. Dr. N. S. Davis, founder of the American Medical Association, in the third week of his practice, though poor, sent in his subscription to a journal.

All this means that, even with few patients,

the hours are being profitably spent. There are so many who do not do this. They are waiting for something to turn up, something to come their way. There are many fault-finders, envious of those who succeed. They whisper of the use of influence, of luck, even of graft. The fault so often is "not in their stars but in themselves that they are underlings." They are idlers. And one effect of all this study at the desk, in the laboratory and at the bedside is that it keeps you always a little ahead, always ready for more than you are now doing. In this way promotion comes because it is deserved. This was one of Pasteur's oft-repeated sayings.

It is not enough, however, that you should "have the goods." You must be able to deliver the goods. This is the art of medicine, as contrasted with the science. It means knowing how to apply your knowledge; more important, it involves knowing *when* to apply it. Or, to put it in another way, technic is not all of the art. One of my colleagues, a leading otolaryngologist, has a telling way of expressing this truth. He says he can, in a few weeks, teach a graduate student how to perform a mastoid operation; but it takes months or years to teach when to do the operation and when to refrain.

Some doctors are honest, industrious, well-informed, even erudite, yet they fail. They lack good judgment and tact. Tact, as you know, means "touch." These men do not understand, and therefore do not get in touch with, human nature. They are not good salesmen; the other fellow, who may not know so much, gets their patients.

We must all be on our guard lest enthusiasm over the strictly medical aspects of the illness leads us to forget the patient. "Doctor," a new patient said to me, "I do hope you will be different from the other doctors whom I have consulted. I trust you will look less at the x-ray pictures and more at me."

Every doctor aims to be honest. Yet one of the difficult things in practice is "to tell the truth." Patients consult us for our opinion and for advice as to treatment. Are they not entitled to the truth? Yes, but what

\*Bull. Evanston Branch Chicago M. S., Sept., 1936.

is the truth concerning an illness? Suppose I say to a patient that he has tuberculosis or a leaky heart valve. I have told the truth as to diagnosis. But if the tuberculosis is curable; if the valvular lesion is not inconsistent with length of years, in reality I may have uttered a falsehood. For tuberculosis may mean to the patient "quick consumption," and a leaky valve may be synonymous with sudden or dropsical death. My bald, naked truth is an untruth. You see what Emerson meant when he said, "It is not the fact that imports, but the impression or the effect of the fact on the mind." Lawrence Henderson, in discussing the problem of Physician and Patient as a Social System—and in a more penetrating and philosophical manner than I—expresses similar sentiments when he says: "Do as little harm as possible, not only in treatment with drugs, or with the knife, but also in treatment with words."

Among features that deserve mention, some of them relatively trivial to be sure, are such things as avoidance of gossip; promptness in response to calls or at consultations; consideration for others' convenience; courtesy in converse; clearness and explicitness in giving directions; assumptions of responsibility for risk in treatment or even for error of judgment, instead of throwing the onus on the helpless patient or weaker colleague; the wickedness of getting the other man's patient by direct or indirect offensive advertising or of injuring another's reputation by unjustified comment or innuendo.

As a science, medicine is far from exact or complete. There is still an enormous field for study. New facts and new principles await investigation in the laboratory and at the bedside. Cancer, many infections, the endocrines, and scores of other problems await their Harveys, Pasteurs, Kochs, or Theobald Smiths. The practice of medicine is still too empirical and crude. New instruments and new laboratory tests will make diagnosis more exact. Preventive medicine is still in its infancy. Dietetic and specific drug therapy will be more accurately and effectively applied. Psychology will be more sensibly and more successfully employed. Surgery will have triumphs as yet undreamed. Social and economic relations may radically change. The individualism of the practitioner may, for a time, seem to be lost in the group or in the imposed authority of the State. But whatever the status of medical science, or the imposed obligations of Society, from out this unknown future there will surely emerge, as long as disease exists, two figures, the physician and the patient, constituting the social system of Henderson. Then as now this doctor must maintain most intimate relations to his patient; then as now there must be heard the words, "my

doctor," "my patient." This doctor, if successful in the true sense, must possess the dual personality, he must be scientific and human or humane. He must know his facts and the principles underlying them, and have the ability to apply them in treating the sick. In addition he must have that touch of nature that makes the whole world kin and that enables him to see, in the sufferer from disease, a man and brother. In a word he must, and I believe will, be a man of character, which means a man of right living. And this, as I understand it, is ethics.

JAMES B. HERRICK, M.D.

Chicago.

### Doctors' Offices

SOME physicians are still content to carry on their work in any reasonably weather-proof shack where they can hang out a shingle, but a steadily increasing number of them are coming to realize that a modern medical practice can be conducted successfully only in surroundings which are more or less attractive and well-suited to the employment of the therapeutic measures which have been developed within the past decade or two.

A human being is not a machine, which can be kept in running order by an occasional application of oil, grease, and gas, but a psychophysical organism, which responds most powerfully to impressions made upon its emotional and sensory perceptive centers. While this is true, the practice of medicine will remain, not all science, but at least fifty percent art, and psychology will play a major part in the success of all therapeutic efforts.

In almost every community of any size will be found one or more physicians who have planned an office intelligently, with an eye, not merely to convenience and efficiency in its operation, but also to making a favorable effect upon the patients.

In order to give our readers the benefit of some of this clever planning, to incite or assist them in doing likewise, we are eager to present to them some of the things which have been worked out along these lines, and hope that a number of physicians who feel that they have particularly attractive and convenient offices will send us photographs and plans of them, with brief descriptions of their furnishings and arrangements, and with statements of the cost of equipping them, if they are willing to furnish these latter data.

As a slight incentive to send us this information, we will give the author of the best story received each month, until further notice, a year's subscription to "C.M.&S." (or,



if already a subscriber, will advance the date of expiration one year), and, to the authors of all other stories which we consider suitable for publication, a six-months' subscription or extension.

The sooner these accounts and suggestions begin to arrive, the better we will like it.

### Osteopathy in England

THOSE who base their present conception of osteopathy upon its status fifty years ago are seriously in error. Then it was taught that disease came from pressure of a bone on a nerve. That definition was found erroneous and given up about 1890, when it was realized that such pressure would cause paralysis, rather than irritation.

About thirty years ago the osteopaths indulged in some introspection and self-criticism, and as a result they made important changes in the curriculums of their colleges and in the definition of their specialty. Soon in Great Britain, as it is in America, the student of osteopathy will receive as comprehensive training as the student of medicine.

Whereas, in the United States, many osteopaths are trying to practice medicine, over here the situation is reversed—all the osteopaths practice manipulative osteopathy and a great number of the medical men try to. Sir George Newman, the permanent Minister of Health, told us recently that 2,000 people, untrained in manipulation and including physicians and sheer nondescripts, call their practice osteopathy. Only 86 of us have actually taken a proper course in that work.

While I am not in possession of the actual details, another situation here differs from the American. The department of animal experimentation in a world-famous university has given us use of their laboratories for demonstrating the osteopathic bony lesions in animals. Rats with induced lumbar (bony) lesions have shown ovarian pathology, and the report will soon be issued for medical and osteopathic doctors' enlightenment. Inasmuch as all of this work has been done in America, it will be relatively easy to produce continued evidential results. Because of the high opinion this university holds, in America and here, conclusions emanating from this source are likely to have a profound influence on the world's opinion of spinal manipulation.

We have a first class organization (on paper) and a college (on paper) for the teaching of osteopathy. Our requirements are level with those of the University of London Medical School, which is the highest here.

There are almost a score of ways to study medicine in this country, and several courses do not require the student to know one word of Latin. The exemption examination leading to the license (L.R.C.P.) accepts Scripture as one of the subjects required and does not call for an examination much in excess of that for the tenth grade of high school. The London matriculation is about level with that for a first-class high school certificate and is a good examination. We are sticking to that requirement, which is practically the highest here. Our first class can easily start in six months and enroll fine well-qualified medical men for a two-year course. Our actual complete course for non-medicals will be between four and five years—five years for a student who has never studied college chemistry.

Since osteopathy is held in such high regard in this country, and since there are so few of us, our reputation suffers from the activities of the grossly untrained "boot-leggers," who are practicing what they call by that name, to the detriment of their patients and of the legitimate members of that specialty.

In a way our position might be something like this. Imagine a country in which no dentists flourish. The resources of the medical and surgical professions would soon find ways of curing toothache and extracting teeth. The method might not suit the patients and might not suit the practitioner, but anyway a service would be rendered. Similarly all the work we do now is in some way disposed of by the medical profession. In our own niche we do our specialty better, having a philosophy of cure. The world could exist without dentists but the cosmetic and professional value of the dental profession is needed.

This little story I am sending you explains why I think our position is one of value, and actually we do little more than cross the path of the medical man. I think it would be good for both arts if we could benefit by having our position understood.

J. J. DUNNING, D.O.

London, Eng.

The medical department of the New York State Library has scores upon scores of medical magazines in different languages, but perhaps it would interest you to know that CLINICAL MEDICINE AND SURGERY is one of the most popular of all. Practicing doctors, medical students and even we nurses enjoy it thoroughly. We especially like the article every month in the front about some famous doctor.—S. M., R.N., N. Y.

# THE SEMINAR

## "A MONTHLY POSTGRADUATE COURSE"

(NOTE: Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussion of any or all problems submitted.)

Discussions should reach this office not later than the 5th of the month following the appearance of the problem.

Address all communications intended for this department to The Seminar, care CLINICAL MEDICINE AND SURGERY, Waukegan, Ill.)

### Problem No. 10 (Surgical—?)

Presented by Edmund Lissack, M.D.,  
Concordia, Mo.

(See CLIN. MED. & SURG., Oct., 1936, page 512)

**RECAPITULATION:** A previously healthy woman of 22 years, with no suggestive history, developed profuse menorrhagia, with no other symptoms of serious import.

Examination showed slight emaciation; secondary anemia (hemoglobin, 52 percent; red cells, 3,790,000); moderate leukocytosis (10,950); coagulation time, three minutes; Wassermann test, negative; a functional heart murmur; and a hard, smooth, fixed mass in the lower abdomen and pelvis. Otherwise she appeared to be normal.

**Requirements:** Suggest diagnosis (giving reasons) and treatment.

**Discussion by John Clark, M.D.,  
Independence, Kans.**

Bleedings from the vagina are of a variety of sorts and causes. Broadly speaking, there are two classes of bleeding: those due to organic disturbances, and those due to endocrine disturbances. Taking this case with this broad viewpoint will enable us to limit our discussion to the one field or the other. I see no chance to bring the endocrines into this discussion. It is true that the patient has headache, which may be due to anemia, as shown by a hemoglobin percentage of 52, and by her loss of weight. Headache is a major symptom of endocrine dysfunction, but since there are no other signs of it there is no ground for suspicion of it in this case.

The examination shows that there is an enlargement of the internal genitalia. Is this enlargement confined to the ovary or both ovaries, or to both ovary and uterus? A tumor of an ovary may give cause for speculation as to whether the enlargement is in the uterus or ovaries or both. Ovarian tumors almost never give rise to menstrual troubles unless both ovaries are involved, when there would be amenorrhea.

Our discussion is, therefore, limited by these statements of Doctor Lissack to bleeding due to organic disturbance. These statements are: A hard mass felt in the lower pelvis; a uterine bruit; slight emaciation; a hemoglobin percentage of 52. These statements limit our discussion to the various conditions likely to cause bleedings from enlargement of the uterus. Of these enlargements, the ones which hold chief place are: normal pregnancy, ectopic pregnancy, cancer, and some variety of myoma.

From the history, all forms of pregnancy go out of the picture. I never saw or heard of a case of pregnancy which gave so long a history of bleeding as this case. Certainly she might be pregnant; but, if she is pregnant, her pregnancy is not the original cause of this bleeding. If the uterus is enlarged and asymmetrical, we may be confident that the tumor is confined to that organ.

Cancer of the body of the uterus hardly fits this case, because such a cancer, without previous ulceration, erosion, or eversion of the cervix, is a rare condition. In case these conditions are present, it is folly to neglect a pathologic study of scrapings from this region.

By far the most frequent tumor in this region, causing bleeding, is a myoma. If there is more than one tumor, the shape of the uterus will be irregular. If the tumor has become cystic there will be a bruit. Since we have presented, in this case, an enlargement in the region of the uterus; the presence of a bruit; emaciation; and long-continued bleeding, my probable diagnosis is myoma. The treatment is surgical.

**Discussion by W. A. Newman Dorland, M.D.,  
Chicago, Ill.**

The physical findings suggest two possibilities: an ectopic pregnancy or a chronic pus-tube of probable gonococcal origin.

The ectopic pregnancy would be excluded by the symptoms which are present. There is no record of menstrual suppression for one

or two periods, although the pregnancy could exist without such a menstrual history. Again, the pelvic mass is not exceedingly sensitive, as a gestational tumor generally is. There is no history of shock indicative of tubal rupture.

On the other hand, the gradual increase in the menstrual flow over a long period covering a year or more, and the pain localized in the left ovarian region, would indicate a chronic infection in the pelvis on the left side. The hard, smooth mass, more or less fixed, is very typical of pyosalpingitis or pus-tube.

My diagnosis, therefore, is a chronic pus-tube on the left side. As the normal temperature indicates that the acute stage is past and the leukocytosis is typical of such a condition, my treatment would be an abdominal section with removal of the affected tube, followed by appropriate remedies to counteract the anemia.

#### Discussion by N. Odeon Bourque, M.D., Chicago, Ill.

Our knowledge of the menstrual processes is more developed along anatomic than physiologic lines. The complicated menstrual mechanism extends far beyond the pelvic cavity, and while bleeding is, in the majority of cases, due to anatomic causes, the entire menstrual apparatus should be thoroughly investigated in obscure cases.

In this investigation the general health of the individual should receive careful consideration, this to include the nervous system and its vasomotor mechanism; the uterus and its endometrium; the ovaries and the entire endocrine system; and the fallopian tubes.

The blood picture in this case discloses a simple anemia, probably due to a chronic infection or to the loss of blood or both. The functional murmur may be due to this anemia. Frequent micturition is probably the result of pelvic congestion, pressure on the bladder, or irritation of the external meatus by the prolonged flow.

The character of the pain has not been described. A colicky or intermittent pain would point to the contraction of the uterus in its attempt to expel the clots. A steady, persistent pain may indicate an ovarian condition due to congestion and pressure.

The headache may be either of reflex origin or due to anemia or defective eyes. No statement is made as to whether or not the headaches accompanied the flow or appeared independently; whether they were exaggerated on standing; etc.

The menorrhagia is of the type which accompanies uterine myomas, adenomas, ovarian cysts, or pelvic congestion due to infection, pus-tubes, etc. The hard, smooth

mass in the lower abdomen (size not given) may be either a uterine myoma, adenoma, or fibroma; an ovarian cyst, a sterile pyosalpinx or hydrosalpinx. The tumor may be incarcerated below the promontory of the sacrum or fixed in this position by adhesions, and, by exerting pressure on the pelvic vessels, a bruit is transmitted.

There is no statement as to the consistency, mobility and size of the uterus, nor is there mention of its relation to the mass. It would be of advantage to know the time cycle of the periods. The leukorrhea is probably due to an accompanying metritis, but no microscopic findings are reported. The age of the patient would favor a diagnosis of either an ovarian cyst or pyosalpinx in a quiescent stage. Knowledge of the size and position of the mass, and of the previous history of the patient would be valuable for definite diagnosis.

*Treatment:* While sufficient radium will shrink a fibroid, there is, however, always some danger that the ovaries may be destroyed. Surgery is the only rational method for removing the cause.

One might try Antuitrin S, 2 to 5 cc., repeated every third day for from 6 to 9 injections; or autohemotherapy, using 14 cc. of blood, drawn into a syringe containing 6 cc. of sterile water, shaken to hemolyze it, and injected intragluteally; or, if it is determined that the trouble is in the uterus, radium, 25 milligrams, well screened, for 10 to 15 hours, the bladder and rectum being well protected by means of vaginal packs. Radium, however, must never be used in the presence of inflammatory lesions; where pus is pent in, it is contraindicated. It is useless in ovarian cysts.

*Surgical treatment* is the method of choice.

#### Discussion by F. F. Schwartz, M.D., Fairport Harbor, Ohio

The young lady's case, as presented in the October issue of "C.M.&S.," suggests one of the following diagnoses: (1) Hypochromic anemia; or (2) fibromyoma.

*Hypochromic anemia* is my diagnosis, on account of the blood picture together with the low color index, and this condition is secondary to the menorrhagia.

*Fibromyoma* stands out as the causative factor in the patient's menorrhagia. A thorough vaginal examination, together with uterine probing under strict aseptic conditions, will shed light on the final diagnosis. Fibromyoma may undergo pathologic changes and a cystic-like softening may take place, in which instance the fluid thrill could be elicited.

*Differential Diagnosis:* In left ovarian cyst, menorrhagia is not an outstanding symptom; the size of the uterus is not altered; the

contour is not changed; and probing will reveal a normal-sized canal.

**Treatment:** Build up the patient's blood with appropriate tonics; put her to bed with an ice bag over the pubis; push fluids. After she is built up, a laparotomy is indicated. If the diagnosis of fibromyoma is established, a total hysterectomy is advisable, after which she should have necessary treatment for her artificial menopause.

**Discussion by Millard F. Cupp, M.D.,  
Clarksburg, Ind.**

This patient's age is stated as being in the precancerous period, yet one must remember that "freak" cases are met with at an age no higher than this. The fact that the menstrual periods began to increase, in both length and frequency, is truly a suspicious circumstance, but the diagnosis cannot be regarded as established on such evidence alone, although the fact that the practitioner recognizes its probable significance tends to make for the safety of the patient.

The history and description are not complete, but the wary practitioner must train himself to observe his patient, keeping in mind those possibilities which are to be dreaded, and giving the woman the benefit of the doubt. It is in just such fragmentary form that most of our cases come to us.

This woman may have a diseased endometrium; she may have a developing fibroid, endometrial polyp, subinvolution of the uterus, relaxation of the uterine musculature, retrodisplacement, uterine carcinoma or sarcoma, tubal pregnancy, cystic degeneration of the ovary, or carcinomatous ovarian tumors.

Of course, some of these are improbable, yet it is well to remember that it is the unusual and the improbable which often trips one up.

For a good many years it has been my custom to advise a curettage in these cases, and to submit the scrapings to a pathologist. This prevents the terrible mistake—terrible in its consequences—of failing to recognize carcinoma early enough.

This would be my advice to this patient.

**Solution by Dr. Lissack**

Under gas-oxygen-ether anesthesia, the abdomen was entered through a low midline incision. A fibroid uterus, which was not adherent to other structures, was delivered

through the incision and the broad ligaments clamped on each side.

The fibroid was amputated above the cervix, in the usual fashion, and the tubes and ovaries preserved on each side. Both were normal. The cervical stump was carbolized and the entire raw surface covered with peritoneum.

The appendix, which was quite long and thick, was removed in the usual manner and the stump inverted.

A split rubber tube containing a wick of moist gauze was inserted into the pelvis.

The abdomen was closed in layers, using No. 1 plain catgut for the peritoneum, No. 1 chromic for the fascia, and silkworm gut for the skin.

The pathologist reported an encapsulated, degenerating myoma of the uterus, 9 cm. in diameter, showing no evidence of malignant changes.

The result of the operation was satisfactory.

**Problem No. 12 (Medical)**

**Presented by Thomas A. Lowe, M.D.,  
St. Paul, Minn.**

**A** MAN, 51 years old and weighing 180 pounds, whose family and personal history showed nothing significant, and who had always worked regularly as an executive, was taken with a sudden and severe pain in the upper right quadrant of the abdomen, extending around the lower chest to the right kidney region. This pain was constant for ten days and required opiates and hot packs to relieve it. There was no vomiting. Treatment directed to the gallbladder, kidney, and stomach gave no relief.

**Examination:** At no time did his temperature exceed 99.6° F.; his abdomen was tender on pressure, but not rigid, from the gallbladder to the kidney region; his heart and lungs were normal; he had no hernia; his blood pressure, reflexes, and urine were normal; his leukocytes varied from 5,000 to 9,000 per cu. mm., at different times; x-ray studies of the gallbladder, stomach, kidney, and bowel, and a cystoscopic examination, showed nothing significant; his blood Wassermann reaction was negative.

**Requirements:** What is your tentative diagnosis, and why? What further information would you need? Suggest treatment.

# CLINICAL NOTES and ABSTRACTS

## Infantile Paralysis

INFANTILE paralysis (poliomyelitis) is definitely on the increase in this country at the present time, and the number of cases in certain sections is alarmingly high.

Infantile paralysis generally appears during the late summer and early autumn. It affects children under 15 years of age, for the most part, although frequently adults also become victims of this disease. The onset of poliomyelitis is generally so similar to common childhood diseases that it often remains unrecognized until severe paralysis sets in. The following outline is submitted for the purpose of stimulating alertness on the part of all physicians, in order that an early diagnosis may be made:

1.—*Symptoms of general malaise and fever*, with a probable history of upper respiratory infection or bowel upset.

2.—*Symptoms of meningeal irritation*: Headache; backache; stiff neck; stiff back.

3.—*Muscle involvement*: Pain; weakness; tenderness.

4.—*Physical examination*, in the early stages, shows: Fever; rigidity of the neck; pain on bending the head forward; rigidity of the back; tremors of the arms and legs; muscle tenderness; *altered reflexes*—the throat (gag) reflex is absent in the bulbar type; the biceps, triceps, knee and ankle jerks are exaggerated or depressed; the abdominal and cremasteric reflexes are absent.

5.—*Spinal fluid findings*: Increased globulin; 10 to 250 cells per cubic mm.; predominance of lymphocytes; normal sugar.

6.—*Differential diagnosis*:

A.—*Epidemic meningitis* shows: Higher temperature; stiffer neck—opisthotonos; pus in the spinal fluid, with polymorphs predominating.

B.—*Tuberculous meningitis* shows: Slower onset, with low temperature; spinal fluid sugar low; tubercle bacilli may be found in the spinal fluid.

C.—*Encephalitis* is more common in adults; shows occipital headache and more stupor; photophobia and blurring of vision; the spinal fluid findings are the same as in poliomyelitis.

7.—*Early treatment*: Administration of human convalescent serum (reactions need not be feared), 20 cc. intraspinally, after removal

of 25 cc. of spinal fluid, in addition to 60 cc. intravenously for children under 6 years; 80 to 100 cc. for children from 6 to 12; and 140 to 180 cc. for all others. Do not give serum intraspinally in bulbar poliomyelitis. Give the total amount intravenously.

*Early orthopedic care* should be instituted: Use a firm mattress (place table leaves underneath it); keep the back perfectly straight and the arms away from the sides of body, with the wrists up and fingers flexed; keep the knees flexed five degrees (place a pillow underneath them), the toes up, and the feet held at right angles by a splint; keep the bed clothing off the feet with a cradle.

If, after a careful examination, you suspect poliomyelitis, call an expert consultant immediately, to assist you in making the diagnosis and advising the course of early treatment to be followed. Prompt diagnosis and early administration of convalescent serum may prevent paralysis and lifelong crippling.

FRANK J. JIRKA, M.D.,  
Director of Public Health.

Springfield, Ill.

### Diagnosis of Undulant Fever\*

THE diagnosis of brucella infections in man has usually been confirmed by a positive agglutination test or a positive blood culture.

Our observations indicate that the intracutaneous test may be used to determine a state of allergy resulting from brucella infection. This test alone may be useful in determining the presence of infection with brucella in individual patients, or the incidence of this infection in groups of the population. However, it gives no indication of the immunity status of the patient. A positive skin test may indicate infection or may be found in an individual who has been infected but who has developed an immunity to brucella.

The technic of the intracutaneous test has been described by Huddleson and others. The material consists of a soluble nucleoprotein fraction of the three species of brucella, in 1:1,000 dilution in slightly alkaline physiologic solution of sodium chloride. In the performance of the test, 0.1 cc. of the solu-

\*J. A. M. A., Oct. 24, 1936.



tion is injected intracutaneously. The allergic test should be read 48 hours after the injection is made, in order to allow non-specific or pseudopositive reactions to subside.

Immunity may be determined by the opsonocytophagic test. This test consists in mixing 0.1 cc. of the patient's citrated blood with an equal quantity of a live, twenty-four-hour saline suspension of brucella organisms. The mixture is shaken and then incubated at 37° C. for 30 minutes, after which the tube is shaken again and a small amount of the mixture withdrawn and placed on a clean slide. A smear is made and stained with Hasting's blood stain. Twenty-five polymorphonuclear neutrophilic leukocytes are then examined and the degree of phagocytosis is recorded for each cell.

It is possible with the use of these two tests to determine whether individuals are susceptible, infected or immune with regard to undulant fever.

ALVIN E. KELLER, M.D.,  
CRIT PHARRIS, M.D., and  
W. H. GAUB, C.P.H.

Nashville, Tenn.

### The Irritable Colon\*

**C**HRONIC irritable colon is a functional disturbance of the colon resulting in abdominal pain, disturbance of bowel movement and, in most cases, in flatulence.

It is the universal opinion that the continuous use of cathartics is preeminent in the production of the irritable colon. Bran and whole-wheat food in some, raw fruit and vegetables in others, mineral oil and psyllium seed at times, contribute their effect.

The factor which seems to be common to all cases, direct or indirect, is the acceleration of the food movement through the intestines. This fact is established by the soft, sour stools which these patients frequently have, by x-ray examination and by what is known about the action of cathartics and the result of their continued use.

The increased irritability, then, must first exist in the small bowel and result in the incomplete digestion and absorption of food. Thus, excessive amounts of incompletely digested food are swept into the colon. Bacterial action then contributes its part in the production of the irritable colon, by the fermentation of the undigested food. This results in the excessive production of gas, acids and other chemical bodies in various amounts. All these substances are irritating to the colon mucous membrane.

The chief complaints are constipation, abdominal distress or pain, and "gas." These have endured for months or years and vary in severity, but tend to become more annoying.

Careful palpation of the abdomen reveals a tender colon. It may be tightly contracted, simulating a firm tube. The colon is best felt by employing a rolling type of palpation in the left and right iliac fossae and in the mid-abdomen or just below the navel. The two flexures are not palpable, due to the elevation of the ribs and the deeper position of the colon at these points. The experienced hand soon learns to feel through the abdominal wall and to be insensitive to skin contact. It is actually possible to appreciate the increased tone and thickness of the colon in many cases, where the abdominal wall is not too thick.

Roentgenologic examination should include the opaque enema and the opaque meal. The enema commonly shows the cramping or spasm of the colon. This may be general or rather sharply localized. It is rather common to see the descending colon narrowed throughout its length to a pencil thickness. In other cases a good-sized colon will be seen and, as the tension increases, a very rapid cramping occurs, beginning perhaps at the splenic flexure and passing downward, forcing before it the colonic content.

As to treatment, all cathartics must be avoided. In place of the laxative stimulation, normal bowel peristalsis is reestablished by supplying adequate roughage of a bland nature in the diet. Usually, I recommend the avoidance of potato, peas, corn, lima and baked beans, foods that are unusually high in starch and cellulose, and the interdiction of raw vegetables and raw fruit, with the exception of citrous fruit juices. I make it a practice to specify a definite amount of cooked vegetables and fruit, so as to establish an adequate bowel residue. This amount is altered later, depending on the character of the stool which results. Cereals and bread, with the exception of those containing whole wheat and bran, are allowed, but emphatically the whole-grain products cannot be tolerated at all. The leafy or root vegetables are usually well borne, especially when thoroughly cooked.

By mouth, the drugs of choice are those which directly or indirectly result in quieting bowel cramp. They are belladonna and hyoscyamus, bromides, phenobarbital, and the insoluble heavy alkalies that are not laxative. External heat, applied over the abdomen for twenty minutes, especially after eating, will be soothing to some.

For the first few days after discontinuing cathartics, which means, in some cases, breaking a habit of several years' duration, the patient may need some assistance in starting the defecation. This is provided by several means. A retention enema of one or two ounces of olive oil, mineral or cotton seed oil at night may be helpful to some; others will find a glycerine suppository or a two-ounce

\*N. Y. State J. of Med., Nov., 1934.

bulbful of warm saline solution in the morning sufficient to start what, to them, seems a rather miraculous phenomenon, but which, after all, is merely the reestablishment of a normal mechanism.

H. WALDEN RETAN, M.D., F.A.C.P.  
Syracuse, N. Y.

### Using the Ophthalmoscope\*

THE family physician could make use of the electric ophthalmoscope in his daily practice and become as familiar with its use as with the stethoscope. He may thus combat that feeling which prompts him to shrink from all cases of injury or diseases of the eye, and not neglect the opportunities for making an early diagnosis when immediate treatment is essential to prompt recovery.

Usually the thing that calls the family doctor into the so-called field of the oculist is an injury to the eye. His first guide is the patient's vision. If the vision appears to be normal, the pupils active and equal in size, there is little to be feared; but nevertheless an examination should be made with the ophthalmoscope, and the use of an electric ophthalmoscope is so simple that any doctor can easily master it.

What a patient terms a "sore eye" may or may not prove to be iritis. The doctor may hesitate to give atropine. He may not be sure it is iritis and suspect glaucoma. If that family doctor had mastered the technic of the luminous ophthalmoscope, he would have gained confidence in himself and have favorably impressed the patient as well. By its use, he will so increase his knowledge about conditions of the eye that the oculist's office will not be filled, as at present, with many simple cases. The case that is promptly and properly diagnosed has every advantage.

Acute glaucoma is a condition frequently overlooked in general practice. There may be unilateral pain in the head and behind the eye. A similar pain may be present in iritis, but the presence of a large, fixed pupil, the cloudy cornea, poor vision, stone-like feeling of the globe and the shallow anterior chamber should make a diagnosis—with aid of reflected light and the ophthalmoscope, a simple one.

Again, the family doctor is called to remove foreign bodies from the cornea, which may be easily overlooked. The patient may insist there is still some "trash" in the eye, so it is necessary to make a careful examination with a focal-light ophthalmoscope, and with 2-percent fluorescein or 1-percent mercurochrome, in order to be sure that no abrasion of the cornea or minute ulcer be overlooked.

\*J. Fla. Med. Assn., April, 1936.

Owing to the carelessness of some patients, it may be dangerous to prescribe eye drops for use at home.

The family doctor can know many of the essentials of the eye and the patient has a perfect right to expect him to know these essentials well enough to be able to judge whether his trouble is serious and whether an oculist should be consulted. Such service may cost oculists some practice, but it is, nevertheless, a service that the patient has a right to expect from his true friend, his family doctor.

I know of no better way for the doctors in small towns to hold their patients with railroad connections than the adoption of the practice, when making routine or general examinations, of examining the eyes with an electric ophthalmoscope and thus becoming as familiar with its use as is a neurologist, who depends a great deal on ophthalmoscopic examination in diagnosis.

B. F. HOBSON, M.D.

Miami, Fla.

### The Menopause: Symptoms, Hormonal Status and Treatment\*

A STUDY of 52 cases in the menopause—11 physiologic, 31 surgical castrates, and 10 x-ray castrates—is reported. Of these patients, 9 had no or only minimal symptoms.

The main symptoms of the menopause, irrespective of its origin, are amenorrhea, local pelvic atrophies, and neurovascular disturbances. In addition, arthralgias, fatigability, depression, palpitation and dizziness, headaches, and gastro-intestinal disturbances are complained of by a number of patients. The age of the patients and the duration of the menopause, play no decisive part. On the other hand, the nervous makeup and constitution are of great importance. With few exceptions, nervous and neurasthenic patients have the most violent symptoms. Neither obesity, hypertension nor diminution of libido can be ascribed to the menopause.

Hormonal studies show that cessation of ovarian function is followed by persistent over-secretion (and excretion) of both gonadotropic factors of the prepituitary. Our studies likewise show that injection of the estrogenic factor in proper doses, temporarily overcomes the excessive prepituitary action, with rapid disappearance of these factors from the blood and urine. In at least 50 percent of cases, after the menopause and including surgical castrates, considerable quantities of estrogenic factor circulate in the blood and are excreted in the urine. The source of the estrogenic factor after the re-

\*N. Y. St. J. Med., Oct. 1, 1936.

removal of the ovaries has not as yet been determined, although the ingested food probably accounts for at least some of the factor found. The patient's vaginal spreads also give valuable objective information as to the effect of therapy.

Thirty-three (33) patients were treated, some repeatedly, by means of Progynon B. The dose finally selected as most adequate proved to be 24,000 rat units (120,000 international units), 4,000 R.U. (two ampules) given at a time on alternate days, intramuscularly. The relief experienced from a single course of treatments lasted from one to eight weeks, the average being three to four weeks. No permanent relief results.

It is anticipated that when tablets of estrogenic substance, to be taken by mouth, are generally available, oral therapy will prove to be the best form of treatment.

ROBERT T. FRANK, M.D.,  
MORRIS A. GOLDBERGER, M.D., and  
U. J. SALMON, M.D.

New York City.

### Influenza and the Common Cold

FROM our more recent knowledge of coryza and influenza, we may say that all evidence points to the fact that the common cold and influenza are initiated by a filterable virus, but that most of the toxemia, discomfort, and complications are caused by the invasion of secondary pathogenic bacteria, such as the pneumococcus, streptococcus, staphylococcus and influenza bacillus. Evidence is already at hand that the immunization against the influenza virus is feasible and effective. It seems quite likely that within the next few years some sort of combination vaccine, containing both virus and pathogenic bacteria, will be available for prophylactic purposes and that, by the use of such a vaccine, an active immunity against acute upper respiratory infections will be achieved.—RUSSELL L. CECIL, M.D., in *Northwest Med.*, Oct., 1936.

### Psychotherapy in Parkinson's Syndrome\*

THE primary lesion in the parkinsonian syndrome and other postencephalitic sequelae is organic and affects the centers which have to do with associated movements and the powers of correlation. This results in inability to perform the ordinary movements of the day's routine and causes a striking loss of self-confidence in these unhappy patients, who consider themselves crippled and act accordingly.

Nine (9) patients of this type have been

painstakingly treated by means of: (1) Psychotherapy; (2) progressive and directed relaxation; and (3) re-education in the performance of associated movements, with the help of physical and occupational therapy.

The condition of all of these patients was improved, in several of them markedly. It is believed that the mental catharsis, which most of these patients obtained, was the chief factor in most of this improvement. The oculogyric crises were not controlled. Drug treatment with hyoscine hydrobromide was used as an adjunct in two cases.

WALLACE MARSHALL, M.D.

Appleton, Wis.

### Diagnosis of Roentgenologically Negative Gastric Disorders\*

THE efficiency of modern roentgenologic diagnosis permits classification of diseases of the stomach into roentgenologically positive and roentgenologically negative disorders. The former (ulcer, cancer, and so on) constitute about one-fifth of the cases of chronic dyspepsia coming under observation at the Mayo Clinic.

Gastric disturbances, reflexly engendered by disease of abdominal viscera other than the stomach itself or its continuations, in my opinion, exceed in importance the gastric neuroses, because of their nature and extent and the comparative frequency of their occurrence. They constitute from one-third to two-fifths of all cases. The neuroses constitute about one-fourth of the total.

Only on infrequent occasions are gastric disturbances the sole expression of a disorder remote from the stomach; I have seen such instances, however, in cases of active pulmonary tuberculosis, in toxic or uremic states as a result of prostatic hypertrophy, pyelonephrosis or chronic glomerulonephritis, and in cases of pernicious anemia and sprue.

In from 15 to 20 percent of cases gastric disturbances are attributable to disease of organs remote from the stomach. A complete and systematic anamnesis and physical examination, and a few simple, well-chosen laboratory studies, will usually disclose the true nature of the underlying cause, no matter how irrelevant the subjective complaint may appear to be.

GEORGE B. EUSTERMANN, M.D.

Rochester, Minn.

I think *CLINICAL MEDICINE AND SURGERY* is one of the most practical journals for practicing medical men. The *Seminar* is most instructive. I read every issue from cover to cover.—DR. S. A. D., Alexandria, Egypt.

\**J. Nerv. & Ment. Dis.*, July, 1936.

\**J. A. M. A.*, Oct. 31, 1936.

### A Home-Made Baby Incubator

EVERY hospital works out simple and inexpensive devices, which can be made in its own shops, to meet its own particular needs, and many of these are adaptable to use in other institutions and in private practice. Johns Hopkins Hospital, Baltimore, has been especially fertile in its production of extemporized apparatus.

Here is a baby incubator which they produced and which can be made, at a relatively low cost, by any clever mechanic. Any hospital or private clinic which handles maternity cases, or any physician who does a large obstetric practice, might profitably be provided with one of these devices, to be ready for the emergencies which are sure to arise sooner or later.

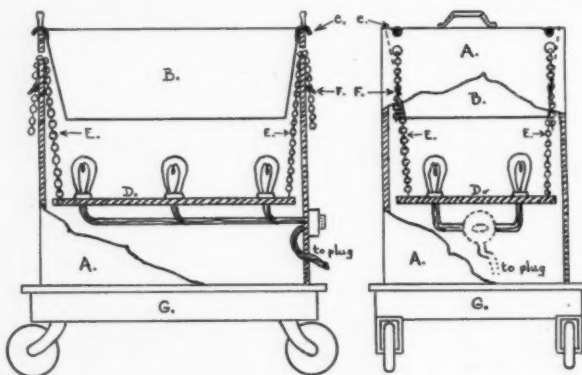


Fig. 1

This incubator (shown, in diagram, in Fig. 1) has walls (A) made of galvanized sheet-iron, lined with sheet asbestos. The basket (B) has sides of the same material and a bottom of heavy wire mesh, to insure ventilation (or the whole basket may be made of the wire mesh). It is provided with handles for ready handling and is held in place in the box by hooks (C) at the ends.

The heating unit (D) is a board with sockets for six carbon-filament incandescent globes, any number of which may be used to obtain the desired degree of heat. The unit is connected to the switch on the outside by a flexible cord, so that it may be moved up and down at will (to get minor variations in the heat) by means of the chains (E), without disturbing the baby. These chains pass through holes in the ends of the box and are held at the desired positions by hooks (F).

The whole apparatus is mounted on a wooden platform (G), which is furnished with large, rubber-tired casters, so that it may readily be moved about.

When in use the basket is equipped with a light and porous mattress and lined throughout with blanket material, covered with an old sheet. The baby is placed in it and well covered, and the top of the basket is closed, except an opening for ventilation, by covering it with a folded sheet. The connecting cord is plugged into a handy socket and the switch turned on, the heat in the basket being carefully controlled by raising or lowering the heating element by means of the chains.

GEO. B. LAKE, M.D.

Waukegan, Ill.

### Why Intravenously?

EVOLUTION is the law of nature. Evolution in the science and art of medicine has changed fundamentally the methods of treating diseases. From the primitive method of drug administration by mouth to the giving of medicine by the hypodermic syringe was a long step forward, and that from the subcutaneous injection to the intramuscular injection was a logical conclusion.

But from the intramuscular injection, a further step to the intravenous injection was inevitable. It had to come and it has come to

stay. In time, the intravenous route will be the *prima via* of medication. There is every argument for, and hardly any against its more general use. Once admitted that the blood is the medium through which medicine is carried to every organ, tissue and cell of the body, there is nothing to contradict the conclusion that to introduce medicine directly into the blood is simpler, surer, and even safer than to depend upon its reaching the circulating medium after having run the gauntlet of digestion, alteration, and modification by its passage along the gastro-intestinal tract. There is a saving of time and effort and a prevention of imperfect action and uncertain effect.—*Journal of Intravenous Medication, India.*

### Intestinal Tuberculosis\*

INTESTINAL tuberculosis occurs in about 75 percent of all patients dying of pulmonary tuberculosis. A large number of these patients present no symptoms referable to the

\*Rev. of Gastroenterol., Sept., 1936.



intestinal tract. The commonest symptoms are pain and diarrhea. There is no specific relation between the site of the lesion and the character of the symptoms.

The ileocecal region is the area of predilection, but lesions may occur in almost any combination of regions in the gut. The small intestine, especially the ileum, is often alone involved.

The best diagnostic method evolved is the x-ray picture, showing local spasm and hypermotility, or a filling defect in the cecum. For a lesion above this area, in the small intestine, no practical method of determining the diagnosis has been devised.

Tuberculosis of the intestine is curable. The prognosis depends largely on the condition of the pulmonary disease. Ultraviolet irradiations and a diet high in vitamins C and D are of great help in the relief of symptoms and probably in the cure of this disease.

As a prophylactic measure, every effort should be made to prevent the swallowing of sputum and to bring about the disappearance of tubercle bacilli in the sputum of patients suffering from pulmonary tuberculosis.

R. J. ERICKSON, M.D.

Albany, N. Y.

### Fixation Pins and Plaster Casts in Treating Fractures\*

**O**BJECTIONS to the use of plaster of Paris casts in the treatment of fractures resolve themselves into criticisms of the method of its application. Plaster of Paris casts can be, and are being applied so that they are ideal fixation devices for the treatment of fractures. The fact that they can be poorly applied is a criticism, not of the medium but of the individual who applies the cast.

Hugh Owen Thomas, of Liverpool, devised the best and most useful extremity splint that has ever been made. Most of the traction devices employed at the present time are modifications of the Thomas splint, which may, if ingeniously employed, accomplish as much as any modern device in the treatment of fractures of the femur and leg.

What must be remembered is, that at the beginning of the treatment of fracture, the extremity must be brought to full length, correct alignment, proper position as to rotation of the fragments, and there fixed so as not to lose any of these elements necessary to secure healing in correct position.

There has been much debate about the use of adhesive plaster traction, icetongs, pins, wire, and other mechanical devices for the control of length and position in fractures.

The use of fixation pins through the bone

fragments was the first really new, modern suggestion for better control in fracture treatment. Icetongs, wires, etc., have frequently failed to remain in correct position. When used with weight-and-pulley traction they may cause local irritation or infection and have to be removed.

When length and position are difficult to maintain, fixation pins through the fragments and included in plaster of Paris, gives the only really efficient traction and fixation for such cases.

In every large hospital patients will be found for whom position has been lost and length is less than it should be, because icetongs, wire, or pins have had to be taken out. This is usually because they have been employed with weight-and-pulley (elastic) traction. Fixation in really efficient mechanical devices or in plaster of Paris will give perfect control of the fracture and the patient, and will entirely obviate complications due to the skeletal traction devices.

Any device except plaster of Paris requires so much supervision, so much after care, and so much danger of loss of control, that the plaster of Paris is greatly to be preferred.

Pins fixed in plaster of Paris cause no irritation, necrosis, or infectious complications. If the fracture is properly reduced on the fracture table, and the pins are inserted by means of a motor, and fixed immediately in plaster of Paris, no irritative movement, muscle spasm, pain or complications in the neighborhood of the pins are to be expected and the patient is under perfect control at all times.

The breakdown in fracture treatment in compound fractures has usually, if not always, been due to the attempt to place wound treatment ahead of control of the fracture. When a compound fracture is put up in a splint or in a plaster of Paris cast, and when, at the time of securing fixation of the fracture, principal attention is given to arranging the patient for frequent dressings afterwards, loss of position of the fracture and failure to control the patient are almost sure to result.

Since the introduction of the Orr method in the treatment of compound fractures, none of these complications need to occur. In this method the fracture may be reduced, the wound may be packed open with the vaselin-gauze dressing, and a proper fixation splint or plaster of Paris cast may be applied without provision for subsequent dressings. Chemical antiseptic dressings are not done; there are no rubber tubes in the wound, and no new chemical dressings have to be applied. The entire wound, extremity, and fracture area are to be let alone until healing is well established or until

\*Adapted (by G. B. L.) from an exhibit at the A.M.A. meeting in Kansas City, Mo., May, 1936.



complete healing has actually occurred. In this way, for purposes of treatment, the fracture really becomes a simple fracture and wound complications and sepsis do not occur.

H. WINNETT ORR, M.D.  
and FRITZ TEAL, M.D.

Lincoln, Neb.

Look for **THE LEISURE HOUR** among the advertising pages at the back.

CLINICAL MEDICINE AND SURGERY is the most practical journal in the field of general medicine.—Dr. E. T. H., ILL.

### Premature Infants\*

**A**N infant born before completion of a full intrauterine pregnancy is a premature infant. Its viability is determined by its age and weight, age being a more important factor than weight. In general, there are two groups of prematures: those with pathologic changes caused by disease or infection of the parents or by congenital constitutional defects and deformities of the infant, and those with no pathologic changes.

Restricting our field to prematurity per se, we are confronted with two symptoms: hypothermia and cyanosis. Hypothermia is due to faulty heat regulation; excessive loss of heat through radiation, conduction and evaporation through the skin surface, which is proportionally very great; insufficient oxygen combustion; defective circulation; and insufficient heat production or improper metabolism, all of which result from lack of development of those parts of the nervous system which control these functions.

The chief inherent causes productive of attacks of cyanosis are weak respiratory muscles, softness of the ribs, under-development of the centers of respiration, and the presence of fetal atelectasis. Extraneous causes of cyanosis include aspiration of food or vomitus into the larynx or trachea as a result of poorly developed pharyngeal and laryngeal reflexes, and lack of reflex cough preventing ejection of the aspirated material, pneumonia all too often resulting. Overdistention of the stomach, with resulting interference with diaphragm action is most deadly; meteorism and insufficient water supply have definite bearing upon cyanosis in premature infants.

\*Abstract of a paper from a symposium on "Morbidity and Mortality in Newborns," presented before the staff of the Ravenswood Hospital, Chicago, Nov. 21, 1935.

### Clysis in Dehydration

Quite adequate treatment for hypothermia and cyanosis is rather uniformly provided in the form of incubators and oxygen inhalations. The art of preparing food and the acts of feeding are properly done, as a rule, even though gavage is too seldom practiced. But proper hydrating is all too often neglected. The excellent results obtainable from proper hydrating are frequently life-saving and the procedure bears repetition and long continued use. Possibly considering clysis in terms of quarts and gigantic apparatus causes us to neglect its use, because of our poor perspective of value ratios. One is surprised on considering that a 20 cc. clysis, given to a three-pound infant, is the equivalent of 1000 cc. given to a 150-pound adult (20:3 : 1000:150). Physiologic saline solution, fortified by five percent of dextrose, is a suitable hydrating solution.

The high death rate during the first two days of neonatal life must necessarily be charged to and accounted for by the obstetrician. Little reduction of mortality in this group has been accomplished over a period of many years. The salvage of from 30 to 60 cc. of blood from the placenta, by waiting for the cord to cease pulsation before clamping it off, may be considered in terms of a blood transfusion. By referring back to our previous equation, we can see that even 20 cc. of blood saved for a three-pound premature infant would equal a 1000 cc. blood transfusion to a 150-pound adult. In consideration of the fact that, in 85 percent of all deaths in premature infants, there are indications of cerebral hemorrhage, would not the intramuscular injection of maternal whole blood be almost a justifiable routine procedure?

All premature infants should be considered as potentially rachitic, anemic and spasmodic, and definite prophylactic treatment instituted to anticipate and prevent these conditions. The vitamin needs of prematures are far greater than those of normal infants, regardless of weight.

In no field does there exist so great a possibility of increased life expectancy as a reward for expert medical care. Superior results in the reduction of premature infant mortality await and reward only those organizations generously manned by veteran nurses, coordinating smoothly with well-blended obstetric and pediatric services.

WALTER C. MCKEE, M.D.

Chicago, Ill.

# DIAGNOSTIC POINTERS

## Rubella

THE following combination of symptoms may reasonably be expected in a case of rubella:

1.—Sudden onset, with signs of a cold in the head, the eyes being suffused and the nose running.

2.—Moderate rise in temperature and possibly in the pulse rate.

3.—Throat congested, but not troublesome, and the palate studded with Forchheimer's spots.

4.—A rash, generally macular in character and pink in color, appearing early, spreading rapidly and fading just as rapidly. It markedly involves the face, is especially prominent in the circumoral area and has a strong tendency to coalesce.

5.—A much enlarged post-cervical lymphatic chain, with one gland standing out prominently at the tip of the mastoid process.

6.—The patient, withal, is obviously not very sick.

The importance of the symptomatic picture is in distinguishing rubella from scarlet fever and measles.—Dr. J. R. GRAHAM, in *N. Y. St. J. M.*, Dec. 1, 1932.

## Abdominal Auscultation in Ileus

LISTEN with a stethoscope over each abdominal quadrant for at least 3 minutes in all cases of ileus, to determine whether the condition is mechanical (demanding surgery) or paralytic. In the former type, within the first 24 hours, the peristaltic sounds are intensified up to the point of obstruction and absent beyond it, and metallic tinkling sounds are diagnostic of complete mechanical ileus. In paralytic ileus, no peristaltic sounds are audible.—Dr. N. FLAXMAN, in *J. A. M. A.*, Aug. 3, 1935.

## Brain Symptoms in Hyperthyroidism

WHEN an individual becomes afflicted with thyrotoxicosis, the disease may affect his heart primarily, or his peripheral nervous system, or his eyes, or his brain, depending upon which of the tissues happens to be the most susceptible. In the past few years, out of a series of 40 thyroidectomies for toxic goiter I have found 2 in which the cerebral symptoms predominated.—CAPTAIN F. J. VOKOUN, *Med. Res., U. S. Navy*, in *Mil. Surgeon*, Dec., 1935.

## Early Symptoms of Pulmonary Tuberculosis

IN MORE than fifty percent of cases of tuberculosis, there is a history of close contact with the infection.

The tuberculous patient is optimistic and minimizes his symptoms.

The important early signs are: Cough, with expectoration; hemoptysis, large or small; smooth, fine-textured skin, especially on the thorax; sweating of the axillae.

In the presence of these indications, repeated examinations of the sputum should be made. If these are negative, a careful x-ray study is called for.—Dr. W. BURTON WOOD, in *Brit. M. J.*, Feb. 16, 1935.

## Infantile Convulsions

A CONSIDERABLE number of cases of convulsions in infants may be traced to tetany, resulting from deficient blood calcium. In every case of convulsions, or even unexplained twitchings, the blood calcium should be tested and other symptoms of tetany looked for. If the blood calcium is found low, give 10 cc. of 10-percent calcium gluconate, intravenously, every day for 2 weeks; then give it by mouth, with viosterol.—Dr. J. L. ROTHSTEIN, in *J. Pediat.*, May, 1935.

## Coronary Disease

FROM a study of 94 cases of major coronary occlusion, it appears that 86 percent of these patients survive the first attack.—Editorial in *Nebraska St. M. J.*, Feb., 1936.

## Longevity

THE best insurance for a long life is parents who have lived a long time. Heredity is undoubtedly the most important single factor in longevity, but one can, by taking intelligent thought, build up resistance against the dangers that threaten. Where there is long-lived parentage on one side, and short-lived parentage on the other, nature makes an attempt to rise to the period of greater longevity, and intelligent cooperation with nature may help one to pass the danger points safely.—LUCAS A. MILLER, M.D., in *The Rotarian*, Sept., 1936.

## NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to **CLINICAL MEDICINE AND SURGERY**, Medical & Dental Arts Bldg., Waukegan, Ill., is accompanied by a check for the published price of the book.

*Think what a book is! It is a portion of the eternal mind, caught in its process through the world, stamped in an instant, and preserved for eternity.—LORD HOUGHTON.*

### MacCallum: Textbook of Pathology

**A TEXT-BOOK OF PATHOLOGY.** By W. G. MacCallum, Professor of Pathology and Bacteriology, the Johns Hopkins University, Baltimore. Sixth Edition, Entirely Reset. Philadelphia and London: W. B. Saunders Company. 1936. Price, \$10.00.

MacCallum's standard textbook of pathology has now reached a sixth edition. Extensive revisions and additions have been necessary on account of the many advances reported in the literature, but particularly owing to the extraordinary advances during recent years in the fields of endocrine disturbances, vitamin deficiencies, and virus infections.

The author has discarded the routine method of considering diseases from the standpoint of the different organs of the body. It has seemed more logical to regard a given disease as a departure from normal health brought about by some disturbing agency; then to trace this cause and to discuss the anatomic and functional changes due to it throughout the whole body. This method makes a textbook of pathology read like a treatise on clinical medicine, but, as the author remarks, it is only because pathology and clinical medicine are the same thing viewed from slightly different angles.

Pursuing the conception of disease being due to some disturbing noxious factor, the author treats under the heading, "Types of Injury," such widely different causes as mechanical injuries, chemical injuries, obstructions in hollow organs and in circulating fluids, bacterial and parasitic diseases including infections, and diseases due to injuries to the organs of internal secretions. This wide field naturally includes the great majority of human ailments and, as a matter of fact, 38 of the 75 chapters comprised in the volume are devoted to descriptions of the various types of injuries and their effects.

The 12 chapters on tumors, though necessarily brief, contain a good summary of the present-day knowledge regarding the different types and their distinguishing characteristics.

It would be superfluous to point to the general excellence of the book, as it is well known.

The bookwork is excellent. Although there are nearly 1,300 pages and the volume is

rather unwieldy, yet the convenience of having everything, including the ample index, in a single cover outweighs other considerations.

This is a book which every practitioner of medicine should have on his book shelves.

### Yeomans: Proctology

**PROCTOLOGY.** A Treatise on the Malformations, Injuries and Diseases of the Rectum, Anus and Pelvic Colon. By Frank C. Yeomans, A.B., M.D., F.A.C.S., M.R.S.M. (London, Hon.), Professor of Proctology, New York Polyclinic Medical School; Fellow and Past President, American Proctologic Society, etc. With 421 Illustrations and 4 Colored Plates. New York and London: D. Appleton-Century Company, Inc. 1936. Price, \$12.00.

This is the second edition of Dr. Yeomans' treatise on the malformations, injuries and diseases of the rectum, anus and pelvic colon; the first edition appeared in 1929. It was the author's aim to produce a practical book based on his, then, experience of twenty-six years in clinical and private practice in the field of proctology.

The second edition embodies all recent advances in the subject, and procedures which have become obsolete have been omitted. The notable changes include the injection treatment of hemorrhoids, the oil-soluble anesthetics in rectal conditions, sympathetic ganglionectomy and ramisectomy in megacolon, melanosis coli, subarachnoid injection of alcohol for relief of pain in advanced malignant disease of the lower bowel, and new operations for cancer of the rectum.

The author's aim to produce a practical book appears to have been fully achieved. Thirty-two of the 35 chapters deal with different pathologic conditions in the terminal bowel and anus. Each entity is treated in the same systematic general way, so that each chapter is complete in itself, with a working bibliography of references at the end. The chapter on hemorrhoids, proctitis, ulceration, stricture of the rectum and pelvic colon, and non-malignant tumors of the rectum and sigmoid, are particularly noteworthy and, because these are the most frequently encountered conditions, the practitioner will appreciate them particularly; however, every chapter in the book seems to us excellent

for the clear descriptions and very practical suggestions.

It seems to the reviewer that proctology is rather neglected by both the general practitioner and the general surgeon. There is no sound reason why it should be. Here is a book in which every procedure and detail connected with the subject is so completely and clearly described and illustrated that it should be comparatively easy for the practitioner to execute the appropriate surgical or other treatment for any pathologic condition of the terminal bowel and its outlet. The specialist will find that it fully covers all methods of treatment as well as the most approved methods of investigation.

So far as we can judge this is the best and most practical work on this subject that we have seen. It is well and clearly printed and there is an ample index.

### Rolleston: Endocrine Organs in Health and Disease

**THE ENDOCRINE ORGANS IN HEALTH AND DISEASE.** With a Historical Review. By Sir Humphry Davy Rolleston, Bart., G.C.V.O., K.C.B., M.D., Hon. D.Sc., D.C.L., LL.D., Emeritus Regius Professor of Physic, and Honorary Fellow of St. John's College, Cambridge, etc. London: Oxford University Press, Humphrey Milford. 1936. Price, \$13.00.

Well-written books on the history of medicine, which give evidence of original research and a departure from beaten tracks, have a peculiar charm for the cultured physician. Professor Rolleston's book is of this type and is such as might be expected by one who is acquainted with the previous publications of this distinguished and gifted writer.

The title rather suggests a textbook with a historical addendum, but the work is mainly historical and is based on the author's Fitzpatrick lectures on the History of the Endocrine Organs, delivered in London in 1933 and 1934.

The history proper of endocrinology begins in 1855 when the term "internal secretion" was first employed by Claude Bernard. All the important contributions from that time down to the present day are included in the present volume. One loses the idea that the work is a textbook or even a dry historical unfolding of the subject, owing to the many biographic sketches with portraits of distinguished endocrinologists, as well as the literary notes, anecdotes and bibliographies scattered throughout. There are 35 portraits.

There are 14 chapters, and, apart from a few general ones, each deals with a particular endocrine gland, first giving its history and then dealing with its diseases. Naturally, the pituitary, the thyroid and parathyroids, the adrenals and the gonads receive the greatest attention. The chapters are divided into sections covering particular phases of the subject and each principal section has its own bibliographic references, so that those who wish to delve more deeply may do so.

Although this volume has a special appeal

to those interested in endocrinology and physiology, yet, as an erudite and charmingly-written historical work, it should appeal to every cultured physician. The book is well printed on good paper and there is an ample index.

### Clinical Miscellany

**CLINICAL MISCELLANY.** Volumes I and II. The Mary Imogene Bassett Hospital, Cooperstown, New York. Springfield and Baltimore: Charles C Thomas. 1934 and 1935. Price, \$3.00 per volume.

For years, in the post-pasteurian period, the field of research was almost wholly preempted by the laboratories, but of late the importance and the possibility of clinical research, conducted just as scientifically as that done in the laboratories, are assuming a larger place in the thinking of medical men.

In these two highly valuable volumes, the results of such researches, made by several competent men, are presented in an orderly, complete, and helpful manner. No physician in active practice can study these pages, even for half an hour, without picking up points that will help him in his daily work. These are not textbooks, but the direct reports of personal experiences, illustrated, where necessary, with photographs, drawings, charts and graphs, and thus offering, in an activated form, the basic material out of which wisdom is made.

The first volume contains 22 clinical reports, by ten observers, among which are such subjects as: "Three Cases of Botulism Treated with Antitoxin"; "Tuberculosis of the Spine with Psoas Abscess Pointing at the Umbilicus"; and "The Preoperative Treatment of Prostatic Obstruction."

In the second volume we find, among the 20 clinical reports, "Cholelithiasis and Cholecystitis in Childhood"; "Treatment of Large Decubitus Ulcers"; and "Hemoglobinuria of Obscure Origin."

As patterns for the method and technic of clinical research, these books could scarcely be improved upon. Each essay is followed by an unpadded working bibliography; and each volume has an adequate index. There is something wrong with any clinician who cannot get the worth of his money out of either of these volumes the first week he has them, if he will study them and use the suggestions obtained.

### Peter: Extra-Ocular Muscles

**THE EXTRA-OCULAR MUSCLES.** A Clinical Study of Normal and Abnormal Ocular Motility. By Luther C. Peter, A.M., M.D., Sc.D., Professor of Diseases of the Eye in the Graduate School of Medicine of the University of Pennsylvania; etc. Second Edition, Thoroughly Revised. Illustrated with 136 Engravings and 5 Colored Plates. Philadelphia: Lea & Febiger. 1936. Price, \$4.50.

Many otherwise competent ophthalmologists have more or less neglected that im-

portant part of their field which deals with disorders of ocular motility. This book is intended to correct any possible deficiencies along this line, and serves its purpose excellently.

The text, which is clear and informative, is further elucidated by many highly instructive drawings and charts, a number of which are in colors. Most of the operative technics presented are those which the author has developed during his long and successful experience in eye-muscle surgery. The book-work is excellent.

This compact and helpful volume should find a place in the library of every ophthalmologist, and will be helpful to general clinicians in connection with diagnosis and by giving them an idea of what can be accomplished for their patients by eye surgeons.

### Krafka: Histology

**A TEXTBOOK OF HISTOLOGY.** By Joseph Krafka, Jr., Ph.D., M.D., Professor of Microscopic Anatomy, University of Georgia, School of Medicine, Augusta. Baltimore: Williams & Wilkins Company. 1936. Price, \$2.50.

This is an entirely new and up-to-date textbook of histology which, while it excellently fits the special needs of pre-medical and pre-dental students, has also a much wider field of usefulness. The author appeals to biologists to admit histology into the general college curriculum on the same footing as comparative anatomy, embryology and genetics. He believes the old sequence of training is unbalanced; that the "cell theory" may be more rationally expounded in histology than in comparative anatomy; that "evolution" may be made to take on a newer and less pedantic form under the microscope than under the scalpel; that embryology and genetics are "unfinished business" except in terms of histology; that the student of hygiene, balanced diets, alkalies, vitamins, and even the social sciences, is at sea without the foundation of a sound knowledge of cellular structure.

Physicians long in practice will find the book an excellent and refreshing means of brushing up on the essentials of histology.

### Moses: Contraception

**CONTRACEPTION AS A THERAPEUTIC MEASURE.** By Bessie L. Moses, M.D. Baltimore: Williams & Wilkins Company. 1936. Price, \$1.00.

In 1927, the Bureau of Contraceptive Advice was organized at Johns Hopkins University by the late Dr. John Whitridge Williams and other members of the faculty, and was placed under the direction of Dr. Moses. The purpose of the Bureau was to collect and study, over a period of five years, 1,000 cases in which contraceptive advice was given. When this purpose was achieved, the Bureau ceased to exist.

This little book is the medical director's unbiased report on the medical aspects of con-

traception and the results achieved, and should be in the hands of every actively practicing clinician, so that he may have a sound basis for the advice he gives his patients, and of all others who are interested in practical sociology. The summary shows that birth control, by approved methods, is entirely practical and harmless for the vast majority of even reasonably intelligent people who are sufficiently in earnest to follow simple directions faithfully.

### Jameson: Gynecology and Obstetrics

**GYNECOLOGY AND OBSTETRICS.** By Edwin M. Jameson, M.D., Surgeon, General Hospital; Consulting Surgeon, Reception Hospital, Saranac Lake, N. Y. With 5 Illustrations. New York: Paul B. Hoeber, Inc. 1936. Price, \$2.00.

This is one of the "Clio Medica" series of handbooks designed to present special phases of the history of medicine in a concise and readable form. They give the specialist an opportunity of becoming acquainted with the historical development of his specialty.

This handy pocket-sized volume, which is written more as a story than to add to existing knowledge, traces the history of gynecology and obstetrics from the earliest times down to the development of gynecological surgery at the close of the nineteenth century. However, occasionally, as in the history of the use of forceps, the author refers to developments in the present century.

There is a selected bibliography of references at the end.

The volume fulfills the purposes of the series in that it is concise, very reliable, and, so far as we can judge, accurate.

### Pugh: Squint Training

**SQUINT TRAINING.** By M. A. Pugh, M.R.C.S. (Eng.), L.R.C.P. (Lond.), Medical Officer in charge of the Orthoptic Department, Royal London Ophthalmic Hospital. London: Oxford University Press, Humphrey Milford. 1936. Price, \$2.75.

Squinting or crosseye is so frequently found in young children that a very practical book such as this, dealing with all kinds of squints, should be a desideratum for oculists.

The various types of strabismus and their etiology are described; also the abnormalities of binocular vision which are found in such cases.

The academic side of strabismus is not dealt with; the author aims only at giving an accurate method of measuring the deformity and the technic of restoring binocular vision to normal as far as possible. This is done by orthoptic training, the various apparatus used being fully described and illustrated. When such training does not result in improvement, or the case is judged to be one in which it would be useless, operation is recommended, either as the sole method of treatment or as an aid to orthoptic training. It appears that the best results are obtained by giving the first consideration to the prevention of



amblyopia by occlusion and training when operation is not called for.

This handy and well-printed little book should be on the book shelf of every ophthalmologist.

### Thomas: Story of the Human Race

**THE STORY OF THE HUMAN RACE.** A Biographical Outline of History. By Henry Thomas, Ph.D. Boston: Winchell-Thomas Company. 1936. Price, \$3.00.

Vital history is the record of the men who made it. It is not merely a catalogue of dates and battles, but a drama, which has been continuously enacted by human beings. This is the basis of the author's presentation.

Dr. Thomas has selected the most dynamic personalities of all the ages—not the destroyers of civilization, like Hannibal, Caesar, Napoleon and Genghis Khan, but the builders, like the Buddha, Plato, Goethe, Darwin, and Lincoln—and has woven their lives into a colorful and consistent narrative—a new type of history, which is exciting and easy to read.

Every physician should be a cultured man, and history is a part of that culture. Here is an excellent book for spare-time reading and for reference—one that will pay solid dividends on every hour spent in its perusal.

### Agriculture, Industry and Science

**PROCEEDINGS OF THE SECOND DEARBORN CONFERENCE OF AGRICULTURE, INDUSTRY AND SCIENCE.** Dearborn, Michigan, May 12, 13, 14, 1936. Under the Sponsorship of the Farm Chemurgic Council and the Chemical Foundation, Inc. 1936. Price, 50c.

This report will give to all interested persons the newest ideas regarding "Farm Chemurgic," which means putting chemistry to work for the farmer. Here are discussed the various things which the farm can produce besides food and raiment (such, for instance, as industrial alcohol), and the best ways of producing, marketing and handling them.

### Vaughan: The Anemias

**THE ANEMIAS.** By Janet M. Vaughan, D.M. Oxon., M.R.C.P. Lond., Assistant in Clinical Pathology, the British Post-Graduate Medical School, etc. With Notes on Normal and Pathological Erythropoiesis by Hubert M. Turnbull, D.M. Oxon., F.R.C.P. Lond., etc. Second Edition. London: Oxford University Press, Humphrey Milford. 1936. Price, \$4.50.

The first edition of this book was published in 1933. Its aim was to review the rapid advances in hematology and to apply the knowledge gained to the anemias. The further knowledge acquired during the past two years has necessitated a revised edition.

The anemias are classed as: (a) dyshemopoietic, due to failure in blood production; (b) post-hemorrhagic; (c) hemolytic, due to excess destruction of blood *in vivo*.

The principal sub-types of these main divi-

sions are considered by the author, and the clinical and laboratory findings, as well as other important data, are recorded and discussed under each sub-type.

The book should mainly interest hematologists, laboratory technicians, and pathologists. It seems to be too sketchy and technical to be of much practical value to the general physician.

The bookwork is excellent.

### Saint-Jacques: Medical History

**HISTOIRE DE LA MEDICINE.** By Dr. Eugene Saint-Jacques, Member of the International Society of Surgeons; Fellow of Royal College of Surgeons, Can.; Member of the Canadian Society of Clinical Surgeons; Surgeon at Sainte-Jeanne-d'Arc Hospital, Montreal. Montreal: Editions Beauchemin. 1935.

In this excellent outline of the history of medicine, the author gives a bird's-eye view of the gradual evolution of medical science and practice, from prehistoric times down to the present day. Owing to their outstanding work, special chapters are devoted to Pasteur and Lister.

In a short book of little more than 200 pages, naturally only the highlights of progress can be given, illustrated by the special contributions of the great masters of each epoch. The author has, however, selected his materials judiciously, and the reader will find that everything of importance has been presented in such a way that one obtains a clear conception of the sequence of the evolution of medical events, without being confused with minor details.

M. T.

### Christopher: Minor Surgery

**MINOR SURGERY.** By Frederick Christopher, S.B., M.D., F.A.C.S., Associate Professor of Surgery at the Northwestern University Medical School, Chicago; Chief Surgeon at the Evanston (Ill.) Hospital. With a Foreword by Allen B. Kanavel, M.D., F.A.C.S. Third Edition, Reset. With 709 Illustrations. Philadelphia and London: W. B. Saunders Company. 1936. Price, \$10.00.

We had occasion to notice very favorably the previous editions of Dr. Christopher's book on minor surgery. This third edition has been fully revised and much new material added, including new methods of promoting wound healing, resuscitation upon the operating table, ambulatory vein ligation, leech treatment of phlebitis, injection treatment of hernia, and a number of other recent acquisitions within the scope of the work.

A good deal of the practice of the average physician consists of minor surgery, and although this is recognized, the crowding of the student's courses with major medical and surgical subjects leaves but little time for acquiring knowledge of the treatment of the lesser ailments and injuries. Moreover, the vast increase in traffic and other accidents demands that a physician should be well

equipped and competent to deal adequately with them. For all these and other reasons a book such as Dr. Christopher's will round out insufficient experience in dealing with conditions which any doctor may at any time be obliged to treat. It should be a part of a doctor's working library and covers adequately every phase of the subject.

The book is well and clearly printed. There are nearly a thousand pages of text, numerous suitable illustrations, and an ample index.

### Physician's Accounting System

**DR. COLWELL'S DAILY LOG FOR PHYSICIANS.** A Brief, Simple, Accurate, Financial Record for Physicians. Champaign, Illinois: Colwell Publishing Company. 1937. Price, Standard Log, \$6.00; Double Log, \$11.00.

This book of the year is again available. The tenth edition printed on excellent paper presents the acme of perfection in bookkeeping for physicians. It contains in one volume all the requirements for complete financial records. It is brief, simple and accurate. There is nothing omitted.

Monthly summaries, itemized expense sheets, narcotic, obstetric, inoculation, surgical, personal account, notifiable disease and utility pages are incorporated. It is foolproof and a timesaver for the physician or his secretary.

Brief reviews of past few "Logs" will indicate best vacation months, babies eligible for inoculation, one's rise or fall in the obstetric or surgical fields, and one's percentage of collections. The trend of one's personal and operating expenses, and many other important facts may be determined by an occasional inventory. Income tax is easy to figure from the "Log."

The writer has used this system for years and considers it superior to all others.

J. E. F.

### Roaf: Physiology

**A TEXT-BOOK OF PHYSIOLOGY.** By H. E. Roaf, M.D. Toronto, D.Sc. Liverpool, M.R.C.S., L.R.C.P., Professor of Physiology in the University of Liverpool, etc. Second Edition. Baltimore: William Wood & Company. 1936. Price, \$4.25.

In this textbook, which has reached a second edition, the study of physiology is approached from a viewpoint differing from that in which it is usually presented. The main aim is to apply the laws of mechanics and other physical phenomena to the regulatory processes which govern bodily functions.

There are four parts: Part I deals with the mechanical aspects of physiologic processes; Part II deals with the chemical aspects; Part III deals with nervous regulating mechanisms; Part IV covers the maintenance of the individual and reproduction of the species, toward which the activities of all living organisms seem to be directed ultimately.

The book is a supplemental one to those usually included in medical curriculums. Its object is to give medical and science students a means of applying knowledge which they

have acquired to the study of physiology and to the general principles underlying biologic activities. Its use is not confined to medical students, but all who are interested in the study of life in the animal body will find it interesting. But it cannot be read profitably unless one has a fair acquaintance with physics and chemistry.

### Macalpine: Cystoscopy and Urography

**CYSTOSCOPY AND UROGRAPHY.** By Jas. B. Macalpine, F.R.C.S. (Eng.), Honorary Surgeon and Surgeon in Charge of the Genito-Urinary Department, Salford Royal Hospital, Manchester. Second Edition. Revised and Enlarged. With 297 Illustrations in the Text and 14 Colored Plates. Baltimore: William Wood & Company. 1936. Price, \$9.00.

The first edition of Dr. Macalpine's book, which appeared nine years ago, included cystoscopy only. In this second revised and enlarged edition three chapters on urography have been added and the title changed.

Although the technic of cystoscopy, pyelography and ureterography, in the investigation of the urologic tract, is a main feature of the book yet it would be more correct to have given the title as a treatise on pathologic conditions of the tract, because this is what it really is. Of course, the instrumental findings are essential, but the real value is the correct interpretation of the pictures and this has been excellently done by the author. The chapters on tumors of the bladder, the urinary tract, and congenital abnormalities of the kidney and ureter call for special attention.

A characteristic of the book is the large number of original drawings and colored plates.

To urologists especially, but to all practitioners who systematically use the cystoscope, this book should appeal owing to its completeness and the evident grasp of urologic investigation displayed by the author.

The bookwork leaves nothing to be desired.

### Chamberlain: Symptoms and Signs in Clinical Medicine

**SYMPTOMS AND SIGNS IN CLINICAL MEDICINE.** An Introduction to Medical Diagnosis. By E. Noble Chamberlain, M.D., M.Sc., M.R.C.P., Lecturer in Medicine, University of Liverpool; Assistant Physician, Royal Infirmary, Liverpool, etc. With a Chapter on The Examination of Sick Children by Norman B. Capon, M.D., F.R.C.P. With 282 Illustrations, of Which 17 are in Color. Baltimore: William Wood & Company. 1936. Price, \$8.00.

This is a book for the medical student. It is the author's aim to help the student when he is initiated in the actual practice of medicine, that is, when he first enters the hospital, in his observation of patients to learn the significance of symptoms and the art of eliciting physical signs as well as interpret-

ing them. Naturally, the book aims also to point out to the student the more difficult art of clinical differential diagnosis.

Of the 13 chapters, 7 deal with the cardiovascular, respiratory and other systems, and in each some of the commoner or more important diseases have been included to illustrate how symptoms and signs are pieced together in the jig-saw puzzle of diagnosis. There is a chapter also on the simpler laboratory and instrumental procedures which are usually associated with clinical diagnosis.

The practicing physician who wishes to refresh his memory will find this pleasant and profitable reading.

### Surgical Clinics of North America

**THE SURGICAL CLINICS OF NORTH AMERICA.** Volume 16—Number 3. New York Number. June, 1936. Philadelphia and London: W. B. Saunders Company. Price (per year), paper, \$12.00; cloth, \$16.00 net.

The June, 1936, number of the *Surgical Clinics of North America* contains 22 contributions from New York surgeons. The papers

are eminently practical and most of the procedures described are well within the scope of ordinary general surgical practice.

The number opens with a symposium on surgery for pain. Of the four contributions, we are particularly struck by the paper by Dr. Carnes Weeks on the advantages of "Total Thyroidectomy for the Relief of Pain in Angina Pectoris," and that by Dr. Henry W. Cave on "The Surgical Treatment of Sciatica," by division of the iliotibial band and fascia lata. Other papers which should prove of special interest to the general practitioner who does surgery are the "Treatment of Slipping of the Upper Femoral Epiphysis," by Dr. Philip D. Wilson; "Athletic Injuries to the Muscles and Tendons," by Dr. G. G. Deaver; "The Complications of Gastroenterostomy," by Dr. Richard Lewisohn; "Surgical Treatment of Urinary Infections in Infants and Children," by Dr. Meredith F. Campbell; and "The Injection Treatment of Hydrocele of the Tunica Vaginalis," by Dr. Frederick W. Solley.

This number of the *Clinics* is well up to the high standard established by the serial.

## New Books Received

*The following books have been received in this office and will be reviewed in our pages as rapidly as possible.*

**ALLERGIC DISEASES, THEIR DIAGNOSIS AND TREATMENTS.** By Ray M. Balyeat, M.A., M.D., F.A.C.P. Assisted by Ralph Bowen, B.A., M.D., F.A.A.P. 4th Edition, Revised and Enlarged. Philadelphia: F. A. Davis Company. 1936. Price, \$6.00.

**APPLIED DIETETICS.** For Adults and Children in Health and Disease. By Sanford Blum, A.B., M.S., M.D. Philadelphia: F. A. Davis Company. 1936. Price, \$4.75.

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**BRITISH MASTERS OF MEDICINE.** Edited by Sir D'Arcy Power, K.B.E., F.R.C.S., F.S.A. Baltimore: William Wood & Company. 1936. Price, \$3.00.

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**UROLOGICAL ROENTGENOLOGY.** A Manual for Students and Practitioners. By Miley B. Wesson, M.D. and Howard E. Ruggles, M.D. Philadelphia: Lea & Febiger. 1936. Price, \$5.00.

**MODERN TREATMENT AND FORMULARY.** By Edward A. Mullen, P.D., M.D., F.A.C.S. Foreword by Horatio C. Wood, Jr. Philadelphia: F. A. Davis Company. 1936. Price, \$5.00.

# MEDICAL NEWS



## Dr. Lankford Passes

DR. JOHN S. LANKFORD, of San Antonio, Tex., a fine Southern gentleman and a capable and alert physician, who had contributed frequently and helpfully to the pages of this Journal for many years and was well known to most of our readers, whose recent portrait appears above, passed to his rest in September, 1936, at the ripe age of 78 years.

Details of the years of handicap, which Dr. Lankford met so bravely, will be found in the January, 1936, issue of "C.M.&S.," on page 46. His last article (published posthumously) appears on page 575 of this issue, with a brief sketch of his services to Medicine in the department *Our Contributors*, in the back advertising section.

## Sir Morton Smart Not An Osteopath

It is hoped that no one will be misled by the announcement, in certain newspapers and magazines, that King Edward, of England, recently knighted a doctor of osteopathy. Sir Morton Smart is a doctor of

medicine and a manipulative surgeon. He wrote to the newspapers, in July:

"Under the heading 'Royal Recognition of Osteopathy', you make a reference to me which implies that I am an exponent of osteopathy. I must ask you to correct this wrong impression forthwith.

"I have consistently pointed out . . . that the pathology of osteopathy . . . is without any scientific basis, and is totally opposed to the pathology of manipulative surgery. If the osteopathic conception were founded on scientific reasoning . . . it would be necessary . . . completely to reorganize the medical education in every country in the world."

—RAY G. HULBERT, D.O., Chicago, Illinois.

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The Volta Bureau was established for the purpose of furnishing all this information to all who ask for it. Its services are free. Alexander Graham Bell, the son of a hard-of-hearing mother, the husband of a deaf wife, the lifelong friend of everyone handicapped by deafness, used the money received as a prize for inventing the telephone to found the Volta Bureau so that anyone confronting the problems of deafness might be assured of help. Advice is given as to schools and preschool training, lip reading instruction, hearing aids, social contacts, and psychologic difficulties. While the Volta Bureau is not equipped to do employment service, it gives information in regard to the fields of activity that are open to the deaf and the hard of hearing.

The *Volta Review*, a magazine for parents and teachers of the deaf and for the hard of hearing, is on the reading table of many physicians. Pamphlets dealing with all phases of deafness except medical problems are available to all who ask for them. Lists of such pamphlets and sample copies of the magazine will gladly be sent free of charge. The Volta Bureau is located at 1537 35th St., N. W., Washington, D. C.

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